Agencies and Organizations Asked or Requesting to Comment on the Draft Resource Management Plan/Draft Environmental Impact Statement

Federal

Army Corps of Engineers

Department of the Interior

Bureau of Indian Affairs

Bureau of Land Management

Arizona State Office

Kingman Field Office

Lake Havasu Field Office

Yuma Field Office

Phoenix Field Office

Needles Field Office (CA)

Bureau of Reclamation - Lower Colorado Region

Fish and Wildlife Service

Geological Survey

National Park Service

Environmental Protection Agency (EPA)

Coast Guard

Department of Agriculture

Soil Conservation Service

State, County, and Local Governments State of Arizona

Department of Commerce

Department of Environmental Quality

Game and Fish Department

Department of Transportation State Historic Preservation Office State Land Department Arizona State Parks Central Arizona Project

Arizona Counties

Mohave County

Board of Supervisors
Parks & Recreation
Public Land Use Committee
County Public Works

La Paz County

Board of Supervisors

Yavapai County

Arizona Cities And Towns

Bullhead City

Mayor and City Council Parks and Recreation

Lake Havasu City

Mayor and City Council Parks and Recreation Public Works

Town of Parker

Mohave Valley

City of Yuma

Mayor
Parks and Recreation

State of California

Environmental Protection Agency

Department of Fish and Game

California State Parks

California Lands Commission

Department of Transportation

Department of Boating and Waterways

Metropolitan Water District of Southern California

Office of Historic Preservation

Department of Water Resources

California Division of Tourism

California Counties

San Bernardino County

California Cities and Towns

City of Needles

State of Nevada

Department of Conservation/Natural Resources Division of State Parks Division of Wildlife

Nevada Counties

Clark

Nevada Cities and Towns

Laughlin

Native American Tribes

Aha Macav - Fort Mojave Indian Tribe (Arizona, Nevada) Chemehuevi Indian Tribe (California) Colorado River Indian Tribes (Arizona, California) Havasupai Indian Tribe (Arizona) Hopi Tribe (Arizona) Hualapai Indian Tribe (Arizona) Salt River Pima-Maricopa Indian Community (Arizona)

Yavapai-Prescott Tribe (Arizona)

Special Interest Groups

Arizona Desert Bighorn Sheep Society

Arizona Association of 4-Wheel Drive Clubs

Anglers United, Inc.

Arizona Wilderness Coalition

Back Country Horsemen of America

Best in the Desert Racing

BR Village Resort (Salome)

Brenda Area RV Parks

Bullhead 4 Wheelers

Bullhead City Gun Club

Center for Biological Diversity

Gem & Mineral Club (LHC)

Gem & Mineral Club (Needles)

Havasu Lake (CA) Home Owners Association

Havasu 4 Wheelers

Havasu Gold Seekers

Lake Havasu Marina

Lake Havasu Fisheries Improvement Program Partners

Keep Havasu Beautiful Committee

Maricopa Audubon Society

McMullen Valley Chamber of Commerce

McMullen Valley Drainage District

Mohave Community College

Mohave County Trails Association

Mohave Desert ATV

Multiple Species Conservation Plan Cooperators

Outback Off-Road Adventures

BLM Arizona Resource Advisory Committee

Parker Strip Concessions

Sunshine Resort (Parker Dam)

Walapai 4 Wheelers

Wayside Inn at Alamo Lake

List of Preparers

Though individuals have primary responsibility for preparing sections of an EIS, the document is an interdisciplinary team effort. In addition, internal review of the document occurs throughout preparation. Specialists at the BLM's district, state, and Washington office levels both review the analysis and supply information. Contributions by individual prepares may be subject to revision by other BLM specialists and by management during internal review.

Name	Job Title	Experience/Expertise	Primary Responsibility
Adams, Doug	Fisheries Biologist	20 years State of LA	Fisheries & Aquatic resources
		2.5 years BLM	
Allert, Les	Computer Specialist	29 years Federal Service	Computer Support & GIS Mapping
		19 years BLM	
Barnes, Cindy	GIS Specialist	20 years BLM	RMP Core Team. GIS Specialist; maps and data
Bates,	Renewable Resources Advisor	23 years Federal Service	RMP Core team. Biological resources. Biological Assessment
Christine		4 years BLM	
Blomquist, Brad	Recreation Planner	22 years BLM, 5 years NPS. Both positions involved law enforcement and outdoor recreation planning/management.	Recreation resource
Bodman, Cory	Realty Specialist	11 years BLM	Lands/Realty section and Soils information
Bouldin, Brent	Editor	30 years of experience in technical, environmental, and general publication	Co-editor
Coyle, Charles	Editor	10 years of experience in environmental publication	Co-editor
De Witt, Peter	Lake Park Ranger	Contractor	Recreation and Transportation sections
Dodson, Amanda	Geologist	4 years BLM	Minerals resources

Name	Job Title	Experience/Expertise	Primary Responsibility
Henderson, Mike	Assistant Field Manager, Recreation & Visitor Services	28 years BLM	Technical Review
Koch, Kirk	Lake Havasu Fisheries Program Manager (Special Program Manager)	26 years BLM in aquatic and water-related resource management	Water/Soil/Air, Riparian, & Aquatic Habitat.
Lichtkoppler, Richard	Economist, Bureau of Reclamation	20 years of federal service: 1 year, BLM; 3 years, General Services Administration; 9 years, National Park Service; 7 years, Bureau of Reclamation	Socio-economics and Environmental Justice
		Economics and park planning	
Lovato, Bernadette	Lead Concession Management Specialist	14 years Federal Service: 13 years experience in Concession Management Programs (10 years with NPS & 3 years with BLM)	Concessions
McCoy, Myron	Recreation Planner	19 years Federal service: 14 years BLM, 5 years National Park Service	Recreation resources Transportation and Access
Miller-Allert, Jill	Recreation Planner, Wilderness	29 years Federal service: 16 years BLM, 10 years Corps of Engineers, 3 years National Park Service	RMP Core Team
			Special Area Designations, VRM, and wilderness characteristics
Murray, Sarah C.	Archaeologist	16 years with BLM	Cultural and Paleontological Resources
Parry, Bill	Civil Engineer Tech Safety Officer	28 years Federal Service: 18 years BLM, 10 years US Forest Service Fire Dept Training Captain	Public Health and Safety, and Engineering
Rosalez, Maria	Realty Specialist	30 years Federal Service: 9 years BLM, 21 years NOAA	Lands/Realty section.
Smith, Tim	Field Manager	26 years BLM	Management Oversight
Taylor, Patricia	Assistant Field Manager, Lands & Customer Services	27 years BLM	Technical Review
Trafton, Gina	Planning and Environmental Coordinator	26 years Federal service: 4 years BLM	RMP Team Lead
		Planning, economics, natural resource mgmt.	

Name	Job Title	Experience/Expertise	Primary Responsibility
Williams, Diane	Public Affairs Specialist	25 years Federal Service: 12 Congressional, 13 BLM	Public Affairs, Publications, Outreach, and FOIA
Wilson, Mike	Recreation Planner	34 years Federal Service: 15 National Park Service, 19 with BLM	Technical review of recreation analysis
Wolff-White, Catherine	Environmental Protection Specialist	21 years Federal Service: Oklahoma RMP Team, Texas RMP Team Plan Amendments	Public Safety and Hazmat

Α

ACCELERATED SOIL EROSION: Soil loss above natural levels resulting directly from human activities. Because of the slow rate of soil formation, accelerated erosion can permanently reduce plant productivity.

ACCESS: The ability to legally make use of route or way across public or private lands; without barriers to use by the public or a specified user.

ACQUIRED PUBLIC LANDS: Lands in federal ownership that the government obtained as a gift or by purchase exchange or condemnation. Also see PUBLIC LANDS.

ACQUISITION: The activity of obtaining land and/or interest in land through purchase, exchange, donation or condemnation.

ACRE-FOOT: A unit of measurement for a large volume of water. It equals 325,851 gallons or enough water to cover 1 acre to a depth of 1 foot (43,560 ft³).

ACTIVITY PLAN: A detailed and specific plan for managing a single resource program or plan element undertaken as needed to implement the more general resource management plan (RMP) decisions. BLM prepares activity plans for specific areas to reach specific resource management objectives within stated time frames. Synonymous with Implementation Plan.

ADMINISTRATIVE ROUTES: Routes that lead to developments that have an administrative purpose, where the BLM or some permitted user must have access for regular maintenance or operation.

AIR QUALITY RATING: See CLASS I AIR QUALITY RATING and CLASS II AIR QUALITY RATING.

AIRSHED: The atmospheric zone potentially influenced by air pollutants from various sources.

ALLOTMENT MANAGEMENT PLAN (AMP): A livestock grazing management plan dealing with a specific unit of rangeland and based on multiple use resource management objectives. The AMP considers livestock grazing in relation to other uses of rangelands and to renewable resources (e.g., watershed, vegetation and wildlife). An AMP establishes the seasons of use, number of livestock to be permitted on rangelands, and the range improvements needed.

ALLUVIAL FAN: A low, outspread, relatively flat to gently sloping mass of sediment, shaped like an open fan and deposited by a stream where it flows from a narrow mountain valley onto a plain or broad valley.

ALLUVIUM: Any sediment deposited by flowing water as in a riverbed, floodplain, or delta.

ALL TERRAIN VEHICLE (ATV): A two- to six-wheeled vehicle equipped with low-pressure tires and a seat straddled by the rider.

ANIMAL UNIT: One mature (1,000-pound) cow or the equivalent based upon an average daily forage consumption of 26 pounds of dry matter per day.

ANIMAL UNIT MONTH (AUM): The amount of forage needed to sustain one cow, five sheep, or five goats for a month.

ANNUAL PLANT: A plant that completes its life cycle and dies in 1 year or less. Also see PERRENNIAL PLANT.

APPROPRIATE MANAGEMENT LEVEL: That "optimum number" of wild horses, which results in a thriving ecological balance and avoids a deterioration of the range.

AQUATIC HABITATS: Habitats confined to streams, rivers, springs, lakes, ponds, reservoirs, and other water bodies.

AQUIFER: A water-bearing bed or layer of permeable rock, sand, or gravel capable of yielding large amounts of water.

AQUIFER RECHARGE: The adding of water to an aquifer, a process that occurs naturally from the infiltration of rainfall and from water flowing over earth materials that allow it to infiltrate below the land surface.

ARCHAEOLOGICAL FEATURE: Non-portable object, not recoverable from its matrix (usually in an archaeological site) without destroying its integrity. Examples are rock paintings, hearths, post holes, floors, and walls.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): Areas where special management attention is required to protect and prevent irreparable damage to important cultural, historic, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazard under section 202(c)(3) of the Federal Land Policy and Management Act of 1976.(FLPMA)

ARIZONA STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR GRAZING ADMINISTRATION: Standards and guidelines developed collaboratively by BLM and the Arizona Resource Advisory Council (RAC) to address the minimum requirements of the Department of the Interior's final rule for Grazing Administration, effective August. 21, 1995.

ARTIFICIAL REEFS: Structures placed on the bottom of water bodies for the attraction of fish.

AUTHORIZED: Invested with legal authority through a written agreement, permit, or other legal document by the BLM.

AVAILABLE FORAGE: Forage that can be grazed and still allow sustained forage production on rangeland. Available forage may or may not be authorized for grazing.

AZSITE DATABASE: A geographic information system containing information on recorded cultural resources, including prehistoric and historic sites and properties, and surface surveys (cultural inventories) within the State of Arizona. These data are only available to qualified researchers.

B

BACA BILL: The Federal Land Transaction Facilitation Act of 2000, commonly referred to as the Baca Bill, amended FLPMA to allow a percentage of receipts from qualifying land sales and equalization payments from qualifying exchanges to be returned to the Department.

BACK COUNTRY BYWAYS: Specific routes designated because of the scenic quality of the landscape and/or interpretive opportunities for various levels of vehicular travel. BLM's scenic and back country byways are a component of the national byway system created under Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

BASE HERD: The constant livestock herd size that is continually licensed, but may not be the same as the grazing (carrying) capacity. Also see GRAZING CAPACITY.

BASIN AND RANGE: A landscape characterized by a series of fault block mountains separated by sediment-filled basins.

BEST AVAILABLE CONTROL TECHNOLOGY: Terminology describing a means of pollution control.

BIG GAME: Large species of wildlife that are hunted, such as elk, deer, bighorn sheep, and pronghorn antelope.

BIGHORN SHEEP HABITAT: Area is open to non-vehicular traffic year around (e.g., hiking, biking, and equestrian). Restrictions vary by location and are listed in RMP. Typically, roads are closed during lambing season (January 1–June 30).

BIOLOGICAL ASSESSMENT: Information prepared by or under the direction of a federal agency to determine whether a proposed action is likely to: 1) harm threatened or endangered species or designated critical habitat, 2) jeopardize the existence of species that are proposed for listing, or 3) adversely modify proposed critical habitat. Biological assessments must be prepared for major construction activities. The outcome of a biological assessment determines whether formal Section 7 consultation or a conference is needed. Also see BIOLOGICAL EVALUATION.

BIOLOGICAL DIVERSITY (BIODIVERSITY): The full range of variability within and among living organisms and the ecological complexes in which they occur. Biological diversity encompasses ecosystem or community diversity, species diversity, and genetic diversity.

BIOLOGICAL EVALUATION: The gathering and evaluation of information on proposed endangered and threatened species and critical and proposed critical habitat for actions that do not require a biological assessment. Also see BIOLOGICAL ASSESSMENT.

BIOLOGICAL OPINION: A document that includes the following: 1) the opinion of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service as to whether a federal action is likely to jeopardize the existence of a species listed as threatened or endangered or destroy or adversely modify designated critical habitat, 2) a summary of the information on which the opinion is based, and 3) a detailed discussion of the effects of the action on listed species or designated critical habitat.

BIOME: A region that has distinct types of organisms, substrates, and climate all interacting to produce a large, distinct, and complex biotic community. A major biotic community is characterized by the dominant forms of plant life and the prevailing climate. A biome is the classification of certain physical and chemical characteristics of an environment, such as Mojave Desert or Upland Sonoran Desert.

BLM SENSITIVE SPECIES: See SENSITIVE SPECIES.

BOSQUE: Woodland dominated by trees more than 15 feet tall.

BROADLEAF TREES: Trees that have large leaves, such as cottonwood and willow.

BURN OUT: Setting fire inside a control line to widen it or consume fuel between the edge of the fire and the control line.

C

CAMPING, SHORT TERM: Camping for short terms of up to 14 days (in any 28-day period) on BLM-managed primitive or undeveloped public land.

CANDIDATE SPECIES: Species not protected under the Endangered Species Act but being considered by the U.S. Fish and Wildlife Service for inclusion on the list of federally threatened and endangered species.

CARBON-14 DATING: A method of obtaining age estimates on organic materials, which has been used to date samples as old as 50,000 years. The method was developed immediately following World War II by Willard F. Libby and coworkers and has provided age determinations in archaeology, geology, geophysics, and other branches of science. The method measures the amount of radioactive carbon-14 remaining in an organic object. The half-life of carbon-14 is 5,730 years.

CARRYING CAPACITY (RECREATION): The amount of recreation use which a given resource can sustain before resource quality begins to irreversibly deteriorate. Often this conflict results in use allocation.

CARRYING CAPACITY (WILDLIFE): The most animals a specific habitat or area can support without causing deterioration or degradation of that habitat. Also see GRAZING CAPACITY.

CASUAL USE (RECREATION): Noncommercial or non-organized group or individual activities on public land. Complies with land use decisions and designations, (e.g., Special Area Designations), does not award cash prizes, is not publicly advertised, poses minimal risk for damage to public land or related water resource values, and generally requires no monitoring. If the use goes beyond those conditions, the activity should be treated as any other organized recreational group or competitive activity or event for which BLM would require the event organizer to obtain an SRP.

CASUAL USE (MINING): Mining that only negligibly disturbs federal lands and resources and does not include the use of mechanized earth moving equipment or explosives or motorized

equipment (greater than 25 horsepower). Casual use generally includes panning, non-motorized sluicing, and collecting mineral specimens using hand tools.

CATEGORICAL EXCLUSION: A category of federal actions that do not individually or cumulatively have a significant effect on the human environment and for which neither an environmental impact statement or an environment assessment is required.

CATTLE GUARD: A device placed in a road, usually a grate or series of metal bars placed perpendicular to the flow of traffic, which allows free passage of vehicles but which livestock will not cross.

CATTLE YEAR-LONG (CYL): The amount of forage needed to sustain one cow for a 1-year period. One CYL equals 12 animal unit months (AUMs). Also see ANIMAL UNIT MONTH.

CHAINING: A mechanical vegetation treatment in which two tractors drag an anchor chain extended between them over the terrain to uproot brush and small trees.

CLASS I AIR QUALITY RATING: Under the Clean Air Act, the rating given areas of the country selected to receive the most stringent degree of air quality protection. Also see CLASS II AIR QUALITY RATING.

CLASS II AIR QUALITY RATING: Under the Clean Air Act, the rating given areas of the country selected for somewhat less stringent protection from air pollution damage than Class I areas, except in specified cases. Also see CLASS I AIR QUALITY RATING.

CLOSED AREA: Closed area mean an area where motorized vehicle use is prohibited. Use of motorized vehicles in closed areas may be allowed for certain reasons; however, such use shall be made only with the approval of the authorized officer.

COLORADO RIVER FLOODPLAIN: Combined area of the Colorado River floodway and the Colorado floodway fringes (See Public Law 99-450).

COLORADO RIVER FLOODWAY: The channel of the Colorado River and that part of the floodplain that are necessary to safely convey the floodway flow of either a one-in-one hundred-year flow consisting of controlled releases and tributary inflow or a flow of 40,000 cfs, which ever is greater.

COLORADO RIVER FLOODWAY FRINGE: That area subject to inundation by flood of varying magnitude up to and including the floodway flow, but which is not required for safe conveyance of the floodway flow, and is not included in the computation of the Colorado River floodway elevation.

COMMERCIAL USE: Recreational use of public lands and related waters for business or financial gain.

COMMERCIAL COLLECTION: The collection of plant materials (mainly seeds) that are harvested for commerce whether for seed distribution and/or for plant production.

COMMUNITY: A collective term used to describe an assemblage of organisms living together; an association of living organisms having mutual relationships among themselves and with their environment and thus functioning at least to some degree as an ecological unit.

COMPETITIVE USE: 1) Any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and either or both of the following elements apply: (i Participants register, enter, or complete an application for the event; (ii A predetermined course or area is designated; or 2) One or more individuals contesting an established record such as for speed or endurance.

CONSERVATION EASEMENT: An easement to assure the permanent preservation of land in its natural state or in whatever degree of naturalness the land has when the easement is granted. Also see EASEMENT.

CONSERVATION FOR FUTURE USE: This category is reserved for any unusual cultural resource which, because of scarcity, a research importance, cultural importance, architectural interest, or comparable reasons, is not currently appropriate for consideration as the subject of scientific or historical study that would result in its physical alteration. A cultural property or location included in this category is considered worthy of segregation from all other land or resource uses, including cultural resource uses, that would threaten the maintenance of the present condition or setting, as pertinent, and it will remain in this category until specific provisions are met in the future. A cultural resource will be separated and protected from other non-compatible land uses and preserved in place because a) that particular site type is scarce or unique, b) its information potential cannot be realized through available archaeological methods, or c) it represents an outstanding example of a particular site type.

CONSUMPTIVE WATER DEMAND: This water use requires a diversion away from the original water source and a consumption of the water such as irrigation or domestic beneficial uses. In contrast, a non-consumptive use would involve water recreation or fish habitat. This beneficial use does not involve a water diversion, and does not diminish the quantity of water through the use.

CONTINUITY: Habitat that is uninterrupted by urbanization or other factors. Large continuous blocks of habitat with corridors that connect other similar blocks of habitat can create a continuity of habitat types. Large blocks of habitat can create healthy vegetative communities, fish and wildlife populations.

COOPERATIVE MANAGEMENT AGREEMENT: A document that describes agreements made between BLM and the public on adjusting grazing use. This document also defines the specific adjustments and the schedule of adjustments (usually over a 5-year period).

CORRIDOR: See DESIGNATED CORRIDOR.

COVER: 1) Plants or plant parts, living or dead, on the surface of the ground; 2) plants or objects used by wild animals for nesting, rearing of young, escape from predators, or protection from harmful environmental conditions.

COW-CALF LIVESTOCK OPERATION: A livestock operation that maintains a base breeding herd of mother cows and bulls. The cows produce a calf crop each year, and the operation keeps some heifer calves from each calf crop for breeding replacements. Between the ages of 6 and 12 months, the operation sells the rest of the calf crop along with old and nonproductive cows and bulls.

CRITICAL ELEMENT: The BLM NEPA Handbook (H-1790-1), Appendix 5 lists critical elements of the human environment and notes the need to reflect consideration of these resources

or values in all forms of NEPA analysis. This list is intended to present the minimum of elements that must be addressed: air quality, Areas of Critical Environmental Concern, cultural resources, prime and unique farmlands, floodplains, Native American religious concerns, threatened and endangered specifies, hazardous and solid wastes, water quality, wetlands and riparian zones, suitable and designated Wild and Scenic Rivers and Wilderness (and Wilderness Study Areas).

CRITICAL HABITAT, DESIGNATED: Specific parts of an area that are occupied by a federally listed threatened or endangered plant or animal at the time it is listed and that contain physical or biological features essential to the conservation of the species or that may require special management or protection. Critical habitat may also include specific areas outside an area occupied by a federally listed species if the Secretary of the Interior determines that these areas are essential for conserving the species.

CROSS COUNTRY TRAVEL: Leaving designated, existing, or open route or trail, by either motorized or non-motorized transportation.

CULTURAL PROPERTY: A definite location of past activity, occupation, or use including, but not limited to, archaeological, historic or architectural sites; structures or places with important public and scientific uses; and may include sites or places of traditional cultural or religious importance to specified social and/or cultural groups.

CULTURAL RESOURCES: Any material remains of human life or activities that are at least 50 years old and of archaeological interest. Cultural resource is a broad, general term meaning any cultural property (see CULTURAL PROPERTY) and any traditional lifeway value.

CUSTODIAL GRAZING ALLOTMENTS ("C" Category): These allotments are best characterized by one or more of the following: little, if any, conflict exists in resource use; overall, resource values are relatively low; the biological potential for response to different management is low; the size or potential productivity of the allotment does not warrant the expenditure of funds for supervision; or the cost of range improvements needed to change grazing management exceeds the expected benefits.

CULTURAL RESOURCE DATA: Cultural resource information embodied in material remains and manifested in studies, notes, records, diaries, analyses, and published and unpublished manuscripts.

CULTURAL RESOURCE DATA RECOVERY: The professional application of archaeological techniques of controlled observation, collection, excavation, and/or removal of physical remains including analysis, interpretation, explanation, and preservation of recovered remains and associated records in an appropriate curatorial facility used as a means of protection. Data recovery may sometimes employ professional collection of such data as oral histories, genealogies, folklore, and related information to portray the social significance of the affected resources.

CULTURAL RESOURCE INTEGRITY: The authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during its historic or prehistoric period; the extent to which a property retains its historic appearance.

CULTURAL RESOURCE INVENTORY (SURVEY): A descriptive listing and documentation including photographs and maps of cultural resources. Included in an inventory

are the processes of locating, identifying, and recording sites, structures, buildings, objects, and districts through library and archival research, information from persons knowledgeable about cultural resources, and on-the-ground surveys of varying intensity.

Class I: A professionally prepared study that compiles, analyzes, and synthesizes all available data on an area's cultural resources. Information sources for this study include published and unpublished documents, BLM inventory records, institutional site files, and state and National Register files. Class I inventories may have prehistoric, historic, and ethnological and sociological elements. These inventories are periodically updated to include new data from other studies and Class II and III inventories.

Class II: A professionally conducted, statistically based sample survey designed to describe the probable density, diversity, and distribution of cultural properties in a large area. This survey is achieved by projecting the results of an intensive survey carried out over limited parts of the target area. Within individual sample units, survey aims, methods, and intensities are the same as those applied in Class III inventories. To improve statistical reliability, Class II inventories may be conducted in several phases with different sample designs.

Class III: A professionally conducted intensive survey of an entire target area aimed at locating and recording all visible cultural properties. In a Class III survey, trained observers commonly conduct systematic inspections by walking a series of close-interval parallel transects until they have thoroughly examined an area.

CUMULATIVE IMPACTS: Impacts that result from the incremental changes from all planned actions when added to other past, present, and reasonably foreseeable changes. Cumulative impacts can also result from individually minor, but collectively significant actions taking place over time.

D

DECISION RECORD: A manager's decision on a categorical exclusion review or an environmental assessment. Comparable to the record of decision for an environmental impact statement, the decision record includes: 1) a finding of no significant impact, 2) a decision to prepare an environmental impact statement, or 3) a decision not to proceed with a proposal. Also see RECORD OF DECISION.

DEFERRED ROTATION GRAZING: Moving grazing animals to various parts of a range in succeeding years or seasons to provide for seed production, plant vigor, and seedling growth.

DESIGNATED CORRIDOR: BLM's preferred route for placing rights-of-way for utilities (e.g., pipelines and powerlines) and transportation (e.g., highways and railroads).

DESIRED PLANT COMMUNITY: The plant community that has been determined through a land use or management plan to best meet the plan's objectives for a site. A real, documented plant community that embodies the resource attributes needed for the present or potential use of an area, the desired plant community is consistent with the site's capability to produce the required resource attributes through natural succession, management intervention, or a combination of both.

DESERT TORTOISE HABITAT: Roads closed February through November. Any construction needs to be monitored. Habitat compensation required for disturbance.

DESIGNATED ROADS AND TRAILS: Legal term used in *CFR 8340 - OFF ROAD VEHICLES* as a type of limited area designation. The term "roads and trails" includes all types routes use by off highway vehicles.

DESIRED FUTURE CONDITIONS: Land use plans must describe the outcomes in terms of specific goals and objectives. Goals are usually not quantifiable. Standards are descriptions of healthy, sustainable lands. They may describe sight specific or watershed scale.

DEVELOPED RECREATION SITES AND AREAS: Those sites and areas that contain structures or capital improvements primarily used by the public for recreation purposes. Such sites or areas may include such features as: delineated spaces for parking, camping or boat launching; sanitary facilities; potable water; grills or fire rings; or controlled access.

DISCHARGED FROM MANAGEMENT: This category is assigned to cultural properties that have no remaining identifiable use. Most often these are prehistoric and historic archaeological properties, such as small surface scatters of artifacts or debris, whose limited research potential is effectively exhausted as soon as they have been documented. Also, more complex archaeological properties that have had their salient information collected and preserved through mitigation or research may be discharged from management, as should cultural properties destroyed by any natural event or human activity. Properties discharged from management remain in the inventory, but they are removed from further management attention and do not constrain other land uses.

DISPERSED CAMPING: Generally staying on public lands overnight outside of developed campgrounds or established recreational sites.

DISPOSAL: Through the land use planning process, lands may be identified for release through several methods: R&PP patent, competitive sales or exchange. Tracts identified for disposal must meet criteria identified in the regulations.

E

EASEMENT: The right to use land in a certain way granted by a landowner to a second party. BLM acquires two basic types of easements, conservation easements for the protection of resources and access easements to enhance the ability of the public to use and enjoy the public lands. Also see CONSERVATION EASEMENT.

ECOLOGICAL CONDITION: See ECOLOGICAL SITE RATING.

ECOLOGICAL INTEGRITY: The quality of a natural unmanaged or managed ecosystem in which the natural ecological processes are sustained, with genetic, species, and ecosystem diversity assured for the future.

ECOLOGICAL SITE (RANGE SITE): A distinctive kind of land that has specific physical characteristics and that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

ECOLOGICAL SITE DESCRIPTIONS (RANGE SITE GUIDE): Descriptions of the following characteristics of an ecological site: soils, physical features, climatic features, associated hydrologic features, plant communities possible on the site, plant community dynamics, annual production estimates and distribution of production throughout the year, associated animal communities, associated and similar sites, and interpretations for management.

ECOLOGICAL SITE INVENTORY: The basic inventory of present and potential vegetation on BLM rangelands. Ecological sites are differentiated on the basis of significant differences in kind, proportion, or amount of plant species present in the plant community. The ecological site inventory utilizes soils, the existing plant community, and ecological site data to determine the appropriate ecological site for a specific area of rangeland and to assign the appropriate ecological status.

ECOLOGICAL STATUS: Ecological status is the present state of vegetation of a range site in relation to the potential natural community for that site. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the potential natural plant community for the site. Four classes are used to express the degree to which the production or composition of the present plant community reflects that of the potential natural community (climax).

ECOLOGICAL SITE RATING (ECOLOGICAL CONDITION/ ECOLOGICAL STATUS):

The present state of vegetation of an ecological site in relation to the potential natural community for the site. Independent of the site's use, the ecological site rating is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble those of the potential natural community. The four ecological status classes correspond to 0–25%, 25–50%, 51–75%, or 76–100% similarity to the potential natural community and are called early-seral, mid-seral, late-seral, and potential natural community, respectively.

EDGES: Breaks in continuity of vegetation allowing predation on species utilizing the area.

ELIGIBLE RIVER SEGMENT: Qualification of a river for inclusion into the National Wild and Scenic Rivers System by determining that it is free flowing and, with its adjacent land area, has at least one river-related value considered to be outstandingly remarkable.

ENDANGERED SPECIES: An animal or plant species that is in danger of extinction throughout all or a significant portion of its range (as defined in the Endangered Species Act Amendments of 1982). Also see THREATENED SPECIES.

ENVIRONMENTAL ASSESSMENT (EA): A concise public document for which a federal agency is responsible. An EA serves: 1) to briefly provide enough evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact and to aid an agency's compliance with the National Environmental Policy Act when no EIS is needed; and 2) to facilitate preparing an EIS when one is needed. Also see ENVIRONMENTAL IMPACT STATEMENT.

ENVIRONMENTAL IMPACT STATEMENT (EIS): An analytical document that portrays potential impacts on the human environment of a particular course of action and its possible alternatives. Required by the National Environmental Policy Act (NEPA), an EIS is prepared for use by decision makers to weigh the environmental consequences of a potential decision. Also see ENVIRONMENTAL ASSESSMENT.

ENVIRONMENTAL JUSTICE (EJ): The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income in developing, implementing, and enforcing environmental laws, regulations, and policies.

EPHEMERAL ALLOTMENTS: Allotments that are only authorized for grazing when there is adequate growth of annual vegetation (in spring).

EPHEMERAL FORAGE: Part-time or seasonal forage; forage produced by annual forage species.

EPHEMERAL STREAM: A stream or portion of a stream that: 1) flows only in direct response to precipitation, 2) receives little or no water from springs or no long continued supply from snow or other sources, and 3) has a channel that is always above the water table.

EXCAVATION: The scientific examination of an archaeological site through layer-by-layer removal and study of the contents within prescribed surface units (e.g., square meters).

EXCHANGE: A trading of public lands (surface and/or subsurface estates) that usually do not have high public value for lands in other ownerships that do have value for public use, management and enjoyment. The exchange may be for the benefit of other federal agencies as well as for BLM.

EXECUTIVE ORDER 11644 (February 8 1972): An executive order is a Presidential directive that carries the weight of law. This order requires areas and trails to be designated "open," "closed," or "limited" within 1 year of the above date.

EXECUTIVE ORDER 11989 (May 24 1977): An executive order is a Presidential directive that carries the weight of law. This order provides for special protection for areas and trails on the public lands when it is determined that off-road vehicles will cause or are causing considerable adverse effects

EXISTING ROADS AND TRAILS: Legal term used in *CFR 8340 - OFF ROAD VEHICLES* as a type of limited area designation. The term "roads and trails" includes all types routes use by off highway vehicles.

EXOTIC SPECIES: A species of plant or animal that is not native to the area where it is found. Any species that is not indigenous, native, or naturalized.

EXPERIMENTAL USE: This category may be applied to a cultural property judged well-suited for controlled experimental study, to be conducted by BLM or others concerned with the techniques of managing cultural properties, which would result in the property's alteration, possibly including loss of integrity and destruction of physical elements. Committing cultural properties or the data they contain to loss must be justified in terms of specific information that would be gained and how it would aid in the management of other cultural properties. Experimental study should aim toward understanding the kinds and rates of natural or human-caused deterioration, testing the effectiveness of protection measures, or developing new research or interpretation methods and similar kinds of practical management information.

F

FACILITY FOOTPRINT: The area on the ground defining or delineating the extent of the facility. For a building, it could be the outside edge of the foundation. For a parking lot, staging area, or trail head, it could be a barrier fence or artificial boundary that defines the limits of the particular use.

FECAL COLIFORM BACTERIA: A group of organisms found in the intestinal tracts of people and animals. Their presence in water shows pollution and possible dangerous bacterial contamination.

FECAL STREPTOCOCCUS (STREP) BACTERIA: Bacteria of the intestinal tract with the ability to grow at relatively high pH and temperature and used as an indicator of recent fecal pollution by warm-blooded animals, including humans.

FINE PARTICULATE MATTER (PM 2.5): Particulate matter that is less than 2.5 microns in diameter. Also see PARTICULATE MATTER and INHALABLE PARTICULATE MATTER.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA): The act that: 1) set out, for the Bureau of Land Management, standards for managing the public lands including land use planning, sales, withdrawals, acquisitions, and exchanges; 2) authorized the setting up of local advisory councils representing major citizens groups interested in land use planning and management; 3) established criteria for reviewing proposed wilderness areas; and 4) provided guidelines for other aspects of public land management such as grazing.

FEE SIMPLE TITLE: Unrestricted ownership of real property (i.e., land and whatever is erected or growing on it).

FINDING OF NO SIGNIFICANT IMPACT (FONSI): A document that is prepared by a federal agency and that briefly explains why an action (not otherwise excluded from the requirement to prepare an environmental impact statement [EIS]) would not significantly affect the human environment and not require an EIS.

FIRE INTENSITY: The rate of heat release for an entire fire at a specific time.

FIRE MANAGEMENT: The integration of fire protection, prescribed burning, and fire ecology knowledge into multiple use planning, decision making, and land management.

FIRE SUPPRESSION: All the work of extinguishing or confining a fire beginning with its discovery.

FIRE SUPPRESSION RESOURCES: People, equipment, services, and supplies available or potentially available for assignment to incidents.

FIXED STOCKING RATE: A stocking rate that is fixed and cannot vary from season to season or year to year. Also see STOCKING RATE and VARIABLE STOCKING RATE.

FLOODPLAIN, FLOODWAY, FLOODWAY FRINGE: See COLORADO RIVER.

FORAGE: All browse and herbage that is available and acceptable to grazing animals or that may be harvested for feed.

FREE USE PERMIT (FUP): A permit that that is generally issued to a governmental entity (e.g. state, county, or city) that allows the removal mineral materials from the public lands free of charge.

FUEL LOAD (IN FIRE SUPPRESSION): The ovendry weight of fuel per unit area, usually expressed in tons per acre.

FUEL BED (IN FIRE SUPPRESSION): The fuel composition in natural settings.

FUEL LOAD (IN FIRE SUPPRESSION): The oven dry weight of fuel per unit area usually expressed in tons/acre.

FUEL MOISTURE CONTENT (FUEL MOISTURE) (IN FIRE SUPPRESSION): The water content of a fuel expressed as a percentage of the fuel's ovendry weight. For dead fuels, which have no living tissue, moisture content is determined almost entirely by relative humidity, precipitation, dry-bulb temperature, and solar radiation. The moisture content of live fuels is physiologically controlled within the living plant.

FUGITIVE DUST: Dust particles that are introduced into the air through certain actions such as soil cultivation or vehicles crossing open fields or diving on dirt roads or trails.

FUNCTIONING WATERS (WILDLIFE): A well, catchment, spring, reservoir, or other feature (human made or natural) that provides a reliable source of potable water on a year-long basis. For such a source of water to be considered functional, the quality and quantity of water must be sufficient to sustain native wildlife populations in the local area. For example, a reservoir that fills up during monsoon rains but goes dry in a few weeks is not functional from a wildlife standpoint.

FUNDAMENTALS OF RANGELAND HEALTH: As Described in 43CFR 4180, the conditions in which 1) rangelands are in proper functioning physical condition, 2) ecological process are supporting healthy biotic populations and communities, 3) water quality is meeting state standards and BLM objectives, and 4) special status species habitat is being restored or maintained.

FUNCTIONING WATERS (WILDLIFE): A well, catchment, spring, reservoir or other feature (human made or natural) that provides a reliable source of potable water on a year-long basis. For such a source of water to be considered functional, the quality and quantity of water must be sufficient to sustain native wildlife populations in the local area. For example, a reservoir that fills up during monsoon rains, but goes dry in a few weeks, is not functional from a wildlife standpoint.

G

GRAZING CAPACITY (CARRYING CAPACITY): The highest livestock stocking rate possible without damaging vegetation or related resources. Grazing capacity may vary from year to year or in the same area because of fluctuating forage production.

GRAZING CYCLE: The amount of time required for livestock to rotate completely through all the pastures in an allotment management plan.

GRAZING PERMIT/LICENSE/LEASE: Official written permission to graze a specific number, kind, and class of livestock for a specified period on a defined rangeland.

GRAZING PRIVILEGES: The use of public land for livestock grazing under permits or leases.

GRAZING REST: Any period during which no livestock grazing is allowed within an area.

GRAZING SEASON: An established period for which grazing permits are issued.

GRAZING SYSTEM: A systematic sequence of grazing use and nonuse of an allotment to meet multiple use goals by improving the quality and amount of vegetation.

GROUND COVER: See COVER.

GROUND LITTER: See LITTER.

GROUNDWATER: Subsurface water and underground streams that supply wells and springs. Use of groundwater in Arizona does not require a water right but must only be "reasonable." Groundwater is separated from surface water by the type of alluvium in which the water is found. Water in the younger, floodplain alluvium is considered surface water. Water in the older, basinfill alluvium is considered groundwater.

GUZZLER: A structure that provides water to wildlife from a water collection source.

Н

HABITAT: The natural environment of a plant or animal: 1) Specific parameters of physical conditions used by a single species, a group of species, or a large community. The major components of habitat are generally considered to be food, water, cover, and living space; 2) the natural living space of an organism.

HERD AREA: The geographic area identified as having been used by wild horse or burro herds as their habitat in 1971.

HERD MANAGEMENT AREA: Public land under the jurisdiction of the BLM that has been designated for special management emphasizing the maintenance of an established wild horse and/or wild burro herd.

HERD MANAGEMENT AREA PLAN: An action plan that prescribes measures for the protection, management, and control of wild horses and burros and their habitat on one or more herd management areas, in conformance with decisions made in approved management framework or resource management plans.

HERPETOFAUNA: A scientific term for the combination of "amphibians and reptiles."

HIGH VALUE RECREATION RESOURCES: Certain public lands and waters that possess better-than-average attributes needed to facilitate or enhance a specific outdoor recreation activity.

HISTORICAL SITE: An archaeological site that is more than 50 years old and dates to the historic period, commonly after contact with Europeans and when history is recorded in writing. These sites include, but are not limited to, wagon roads, railroads, mill sites, mining sites, ranching sites, homesteads, and military sites.

HISTORIC CLIMAX PLANT COMMUNITIES: The existing plant community at the time of European immigration and settlement that was best adapted to the unique combination of environmental factors associated with the site.

IGNEOUS ROCK: Rock such as granite and basalt that has solidified from a molten or partially molten state.

IMPLEMENTATION PLAN: A site-specific plan written to implement decisions made in a land use plan. An implementation plan usually selects and applies best management practices to meet land use plan objectives. Implementation plans are synonymous with "activity" plans. Examples of implementation plans include interdisciplinary management plans, habitat management plans and allotment management plans.

IMPROVE GRAZING ALLOTMENTS ("I" Category): These allotments are best described by one or more of the following characteristics: vegetation or watershed conditions are not satisfactory; the allotment's potential production is high to moderate, but it is producing below its potential; there are substantive conflicts with other resource uses; the allotment's size, physical characteristics, and the anticipated benefits from changes in management would warrant investing public funds for range improvements and supervision.

INFILTRATION: The downward entry of water into the soil or other material.

INFRASTRUCTURE: The set of systems and facilities that support a region or community's social and economic structures. Examples of such systems include energy, transportation, communication, education, medical service, and fire and police protection.

INHALABLE PARTICULATE MATTER (PM 10): Particulate matter in ambient air exceeding 10 microns in diameter. Also see PARTICULATE MATTER and FINEPARTICULATE MATTER.

INTERMITTENT STREAM: A stream that generally flows during wet seasons but is dry during dry seasons.

INVASIVE: An "invasive species" is defined as a species that is 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Human actions are the primary means of invasive species introductions.

J



LAND AND WATER CONSERVATION FUND: Established by the Land and Water Conservation Fund Act, a fund that the federal government can use to acquire and develop land and water for conservation and outdoor recreation and to help states in planning for, acquiring, and developing land and water areas and facilities.

LAND CLASSIFICATION: A process for determining the suitability of public lands for certain types of disposal or lease under the public land laws or for retention under multiple use management.

LAND TENURE: The right to exclusively occupy and use a specified area of land. Tenure may also be limited to certain resources ("resource tenure") such as timber but not to all resources in a given area. Tenure may be held by individuals, communities, government, or corporations.

LAND USE ALLOCATION: The identification in a land use plan of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the planning area, based on desired future conditions.

LAND USE AUTHORIZATION: BLM's authorizing through leases, permits, and easements of uses of the public land. Land use authorizations may allow occupancy, recreational residences and cabin sites, farming, manufacturing, outdoor recreation concessions, National Guard maneuvers, and many other uses.

LAND USE PLAN: A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land-use-plan-level decisions developed through the planning process, regardless of the scale at which the decisions were developed.

LAND USE PLAN DECISION: Establishes desired outcomes and actions needed to achieve them. Decisions are reached using the BLM planning process. When they are presented to the public as proposed decisions, they can be protested to the BLM Director. They are not appealable to Interior Board of Land Appeals.

LEASABLE MINERALS: Minerals whose extraction from federally managed land requires a lease and the payment of royalties. Leasable minerals include coal, oil and gas, oil shale and tar sands potash, phosphate, sodium, and geothermal steam.

LEAVE NO TRACE: A nationwide (and international) program to help visitors with their decisions when they travel and camp on America's public lands. The program strives to educate visitors about the nature of their recreational impacts as well as techniques to prevent and minimize such impacts.

LIMITED AREAS: Limited area means an area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type but can generally be accommodated within the following type of categories. Numbers of vehicles; types of vehicles; time or season of vehicle use; permitted or licensed use only; use on existing roads and trails; use on designated roads and trails; and other restrictions.

LITTER: The uppermost layer of organic debris on the soil surface, essentially freshly fallen or slightly decomposed vegetal material.

LIVE FUEL MOISTURE: See FUEL MOISTURE.

LIVESTOCK PERFORMANCE: The efficiency of livestock within an operation as measured by such indicators as percent calf crop, weaned calf weights, animal death rates, and cull cow weights.

LIVESTOCK TRESPASS: The unauthorized grazing of livestock.

LOAM: A soil texture class for soil material that contains 7–27% clay, 28–50% silt, and less than 52% sand.

LOCATABLE MINERALS: Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

LONG TERM VISITOR AREA (LTVA): With the purchase of a permit, visitors may camp for the entire winter season (September 15 to April 15). Permit holders may move from one LTVA to another without incurring additional user fees.

LOW-INCOME POPULATION: Persons living below the poverty level based on total income, of \$18,244 for a family household of four people (two adults and two children) based on the 2002 official measure of poverty.

M

MAJOR RIGHTS-OF-WAY: Rights-of-way along which pass transmission lines (consisting of 115kV or higher) used to transmit large blocks of energy to load centers for distribution.

MAINTAIN GRAZING ALLOTMENTS ("M" Category): These allotments are best described by one or more of the following characteristics: vegetation and watershed conditions are satisfactory; the allotment has the potential for high resource production and is producing close to its potential; there are no serious resource use conflicts; and/or the allotment's size and physical characteristics would warrant investment of public funds for range improvements and supervision.

MAINTENANCE: The work required keeping a facility in such a condition that it may be continuously utilized at its original or designed capacity and efficiency, and for its intended purposes-

MANAGEMENT ACTIONS: Land use plans must identify the actions needed to achieve the desired outcomes, including actions to restore or protect land health. These actions include proactive measures (e.g., measures that will be taken to enhance watershed function and condition) as well as measures or criteria that will be applied to guide day-to-day activities occurring on public land.

MANAGEMENT USE: A cultural resource is used for controlled experimental study that would result in its physical alteration. This study is conducted to obtain specific information on

a) the kinds and rates of natural and human-caused deterioration or b) the effectiveness of protection measures.

MICROPHYLLIC WOODLANDS: Wooded washes containing small-leafed trees and plants, such as mesquite, catclaw acacia, ironwood, and palo verde. These wooded washes provide important habitat for various species of wildlife, especially neotropical migratory birds and bats.

MINERAL ENTRY: The filing of a claim on public land to obtain the right to any minerals it may contain.

MINERAL ESTATE: The ownership of minerals, including rights necessary for access, exploration, development, mining, ore dressing, and transportation operations.

MINERAL MATERIAL DISPOSAL: The sale of sand, gravel, decorative rock, or other materials defined in 43 CFR 3600.

MINERAL MATERIALS: Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended. See also **SALEABLE MINERALS**.

MINERAL RIGHTS: Mineral rights outstanding are third-party rights, an interest in minerals not owned by the person or party conveying the land to the United States. It is an exception in a deed that is the result of prior conveyance separating title of certain minerals from the surface estate.

MINERAL WITHDRAWAL: A formal order that withholds federal lands and minerals from entry under the Mining Law of 1872 and closes the area to mineral location (staking mining claims), development, and leasing.

MINING CLAIM: A mining claim is a selected parcel of Federal Land, valuable for a specific mineral deposit or deposits, for which a right of possession has been asserted under the General Mining Law. This right is restricted to the development and extraction of a mineral deposit. The rights granted by a mining claim protect against a challenge by the United States and other claimants only after the discovery of a valuable mineral deposit. The two types of mining claims are lode and placer. In addition, mill sites and tunnel sites may be located to provide support facilities for lode and placer mining.

MINING DISTRICT: An area, usually designated by name, with described or understood boundaries, where minerals are found and mined under rules prescribed by the miners, consistent with the Mining Law of 1872.

MINING PLAN OF OPERATIONS: A plan for mineral exploration and development that a mining operator must submit to BLM for approval for all mining, milling, and bulk sampling of more than 1,000 tons or more and for exploration disturbing more than 5 acres or on special status lands, including wilderness, areas of critical environmental concern, national monuments, national conservation areas, and lands containing proposed or listed threatened or endangered species or their critical habitat. A plan of operations must document in detail all actions that the operator plans to take from exploration through reclamation.

MINORITY: Individual(s) classified by Office of Management and Budget's Directive No. 15 as Black/African American, Hispanic, Asian and Pacific Islander, American Indian, Eskimo, Aleut, and other non-white persons.

MINORITY POPULATION: Minority populations are identified as either: (1) the minority population of the affected area exceeds 50 %, or (2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

MONITORING: The collection of information to determine the effects of resource management and detect changing resource trends, needs, and conditions.

MULTIPLE USE: A combination of balanced and diverse resource uses that considers long-term needs for renewable and nonrenewable resources, including recreation, wildlife, rangeland, timber, minerals, and watershed protection; and scenic, scientific, and cultural values.

MULTI-SPECIES CONSERVATION PLAN: This Lower Colorado River plan was conceived in 1995 by a partnership of water interests on the Lower River. It was approved in 2005 for a period of 50 years, with the following two-pronged objective:

- 1) Conserving threatened and endangered species habitat, moving listed species toward recovery, and reducing further listing of species associated with the lower Colorado River.
- 2) Accommodating current water diversions and power production, plus optimizing future water benefits to water users to the extent allowable by law.

N

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS): The allowable concentrations of air pollutants in the ambient (public outdoor) air specified in 40 CFR 50. National ambient air quality standards are based on the air quality criteria and divided into primary standards ("sensitive" populations such as asthmatics, children, and the elderly) and secondary standards (allowing an adequate margin of safety to protect the public welfare). Welfare is defined as including effects on soils, water, crops, vegetation, and human-made materials.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): The federal law, going into effect on January 1, 1970, which established a national policy for the environment and requires federal agencies 1) to become aware of the environmental ramifications of their proposed actions, 2) to fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decision making, and 3) to prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED (NHPA): A federal statute that established a federal program to further the efforts of private agencies and individuals in preserving the Nation's historic and cultural foundations. NHPA 1) authorized the National Register of Historic Places, 2) established the Advisory Council on Historic Preservation and a National Trust Fund to administer grants for historic preservation, and 3) authorized the development of regulations to require federal agencies to consider the effects of

federally assisted activities on properties included on or eligible for the National Register of Historic Places.

NATIONAL REGISTER DISTRICT: An area containing sites of cultural significance that is listed on the National Register of Historic Places. See NATIONAL REGISTER OF HISTORIC PLACES.

NATIONAL REGISTER OF HISTORIC PLACES: The official list, established by the National Historic Preservation Act, of the Nation's cultural resources worthy of preservation. The National Register lists archeological, historic, and architectural properties (e.g., districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff. The National Park Service maintains the National Register. Also see NATIONAL HISTORIC PRESERVATION ACT.

NATIONAL REGISTER QUALITY (CULTURAL RESOURCES): Cultural resource properties that meet the National Register criteria and have been determined eligible for nomination to the National Register of Historic Places because of their local, state, or national significance.

NATIONAL TRAILS: The National Trail System Act of 1968 (Public Law 90-543) authorized creation of a national trail system composed of National Recreation Trails, National Scenic Trails, and National Historic Trails. While National Scenic Trails and National Historic Trails may be designated only by an act of Congress, National Recreation Trails may be designated by the Secretary of Interior or the Secretary of Agriculture to recognize exemplary trails of local and regional significance in response to an application from the trail's managing agency or organization. Through designation, these trails are recognized as part of America's national system of trails.

NATIONAL WILD AND SCENIC RIVERS SYSTEM: A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historical, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams: 1) recreation—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, 2) scenic—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and 3) wild—rivers or sections of rivers free of impoundments and generally inaccessible except by trails with watersheds or shorelines essentially primitive and waters unpolluted.

NATIVE SPECIES: A species of plant or animal that naturally occurs the area and that was not introduced by humans (indigenous).

NATURAL SCENIC AREA (NSA): Allocation made in the YUMA RMP that is associated with special management prescriptions. It has no legal authority but is a management tool.

NAVIGABLE WASHES: A wash or arroyo that is wide enough for a vehicle to pass through without damage to vegetation or bank soils and generally has a sandy streambed.

NON-POINT SOURCE POLLUTION: Precipitation-oriented runoff that transports pollutants from surrounding landscape to waterways. Non-point source pollutants typically include

fertilizers, pesticides, oils, solvents, metals, feces, sediment, and other wastes commonly found on the surface throughout human communities.

NONUSE: An authorization that BLM issues to applicants for nonuse of grazing privileges in whole or part, usually for one grazing season.

NO SURFACE OCCUPANCY: A fluid mineral leasing stipulation that prohibits occupancy or disturbance on all or part of the lease surface to protect special values of uses. Lessees may explore for or exploit the fluid minerals under leases restricted by this stipulation by using directional drilling from sites outside the no surface occupancy area.

NOXIOUS PLANT: An unwanted plant specified by federal or state laws as being undesirable and requiring control. Noxious weeds are usually non-native and highly invasive.

0

OFF-HIGHWAY VEHICLE (OHV): Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, deriving motive power from any source other than muscle. OHVs exclude: 1) any non-amphibious registered motorboat; 2), any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; 3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved; 4) vehicles in official use; and 5) any combat or combat support vehicle when used in times of national defense emergencies.

OHV DESIGNATION: Public lands designated for off-highway vehicle use. Lands in the LHFO planning area are designated as "Open," "Closed," or "Limited" for OHV use.

OPEN AREA: Open area means an area where all types of vehicles use is permitted at all times, anywhere in the area is subject to the operating regulations and vehicle standards set forth in 43 CFR 8341 & 8342.

ORGANIZED GROUP ACTIVITY: Structured, ordered, consolidated, or scheduled event on, or occupation of, public lands for the purpose of recreational use that is not commercial or competitive.

P

PALEONTOLOGICAL RESOURCES (FOSSILS): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

PALENTOLOGY: A science dealing with the life forms of past geological periods as known from fossil remains.

PARTICULATE MATTER: Fine liquid or solid particles suspended in the air and consisting of dust, smoke, mist, fumes, and compounds containing sulfur, nitrogen, and metals. Also see FINE PARTICULATE MATTER and INHALABLE PARTICULATE MATTER.

PERENNIAL/EPHEMERAL ALLOTMENTS: Allotments that are authorized for year-long grazing of a specific number of animals and can add additional livestock when there is adequate growth of annual vegetation.

PERENNIAL PLANT: A plant that has a life cycle of 3 or more years. Also see ANNUAL PLANT.

PERENNIAL STREAM: A stream that flows continuously during all seasons of the year.

PERSONAL INCOME: The sum of wage and salary payments, other labor income, proprietors' income, rental income of persons, personal dividend and interest income, and transfer payments to persons, less personal contributions for social insurance.

PLAN OF OPERATIONS: See MINING PLAN OF OPERATIONS

PLANNING CRITERIA: The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision making, analysis and data collection during planning. Planning criteria streamline and simplify the resource management planning actions.

PLANT COMMUNITY: Assemblage of plant populations in a defined area or physical habitat; an aggregation of plants similar in species composition and structure, occupying similar habitats over the landscape.

POINT SOURCE POLLUTION: The discharge of pollution into the environment from a point, typically a pipe.

PRESCRIBED FIRE (BURNING): The planned applying of fire to rangeland vegetation and fuels under specified conditions of fuels, weather, and other variables to allow the fire to remain in a predetermined area to achieve such site specific objectives as controlling certain plant species; enhancing growth, reproduction, or vigor of plant species; managing fuel loads; and managing vegetation community types.

PRIME FARMLAND: As defined by the Farmland Protection Policy Act of 1981, land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor; and without intolerable soil erosion, as determined by the Secretary of Agriculture. Prime farmland includes land with the above characteristics, but is being used to produce livestock and timber. It does not include land already in or committed to urban development or water storage. Also see UNIQUE FARMLAND.

PRIMITIVE RECREATION: Recreation that provides opportunities for isolation from the evidence of humans, a vastness of scale, feeling a part of the natural environment, having a high degree of challenge and risk, and using outdoor skills. Primitive recreation is characterized by meeting nature on its own terms, without comfort or convenience of facilities.

PRIORITY WILDLIFE HABITAT: General areas that are managed to enhance the habitat of one or more specific wildlife species. These areas are now called Wildlife Habitat Management Areas (WHMAs).

PROPER FUNCTIONING CONDITION (RIPARIAN WETLAND AREAS): The condition where 1) enough vegetation, land form, or large woody debris is present to dissipate the stream energy of high water flows, thereby reducing erosion and improving water quality; 2) sediments are filtered, bedload is captured, and floodplains develop; 3) flood water retention and ground water recharge are improved, root masses that stabilize streambanks against cutting action develop, and diverse ponding and channel characteristics are created to provide the habitat and the water depth, duration, and temperature needed for fish production, waterfowl breeding, and other uses; and 4) greater biodiversity is supported.

PUBLIC LANDS: As defined by Public Law 94-579 (Federal Land Policy and Management Act of 1976), lands and interest in land owned by the United States and administered by the Secretary of the Interior, through BLM, regardless of how the United States acquired possession. In common usage, public lands may refer to all federal land, no matter what agency manages it.

PUBLIC USE: A cultural property is eligible for consideration as an interpretive exhibit-inplace, a subject of supervised participation in scientific or historical study, a subject of unsupervised collecting under permit or related educational and recreational uses by members of the general public.

Q

R

RANGE IMPROVEMENT: Any activity or program on or relating to the public lands designed to improve forage production, change vegetation composition, control use patterns, provide water, stabilize soil and water conditions, or provide habitat for livestock and wildlife. Range improvements may be structural or nonstructural.

Structural Improvement: requires placement or construction to facilitate the management or control the distribution and movement of animals. Such improvements may include fences, wells, troughs, reservoirs, pipelines, and cattleguards.

Nonstructural Improvement: consist of practices or treatments that improve resource conditions (e.g., seedings; chemical, mechanical, and biological plant control; prescribed burning; water spreaders; pitting; chiseling; and contour furrowing).

RANGELAND: A kind of land on which the native vegetation, climax, or natural potential consists predominately of grasses, grass-like plants, forbs, or shrubs. Rangeland includes lands revegetated naturally or artificially to provide a plant cover that is managed like native vegetation. Rangelands may consist of natural grasslands, savannas, shrublands, moist deserts, tundra, alpine communities, coastal marshes, and wet meadows.

RAPTOR: A raptor is a bird of prey that is known for its predatory habits of feeding on other animals. This group of birds possesses several unique anatomical characteristics that allow them to be superior hunters. These characteristics include excellent sensory abilities, such as binocular vision and keen hearing in order to detect prey; large, powerful grasping feet with razor-sharp talons for catching prey; and generally large hooked bills that can tear prey apart. They include diurnal or daytime species such as hawks, falcons, ospreys, and eagles; and nocturnal or nighttime species such as owls.

RAPTOR HABITAT: Raptors have specific requirements that their habitat must provide, including food and water, cover from weather, space in which to gather food, and a large enough area to attract mates, establish nesting locations (aeries), and find safe corridors between habitats. Raptors generally nest in low densities and need large areas for successful breeding. Drainage of wetlands, urban expansion, and exotic plant invasions are all affecting raptor habitats.

RECORD OF DECISION: A document signed by a responsible official recording a decision that was preceded by the preparing of an environmental impact statement. Also see DECISION RECORD.

RECOVERY: Improvement in the status of the listed threatened or endangered species to the point at which listing is no longer appropriate under the criteria set forth in Section 4 of the Endangered Species Act. Also, the process by which a species and/or its ecosystems are restored to such an extent that the species is self-sustaining and future survival in the wild can be ensured.

RECREATION AREA MANAGEMENT PLAN (RAMP): A plan prepared for recreation areas requiring special management.

RECREATION AND PUBLIC PURPOSES ACT of 1926 (44 Stat. 741, as amended; 43 U.S.C. 869 et seq.): An act of Congress that allows lease or acquisition of public land to be used for recreation or public purposes by local government entities (county or city governments) and non-profit organizations.

RECREATION AND PUBLIC PURPOSE (R&PP) LEASE: A federal statue that allows the disposal of public lands to any state, local, federal, or political instrumentality or non-profit organization for any recreational or public purpose, at the discretion of the authorized officer.

RECREATION MANAGEMENT ZONES (RMZs): Areas within special recreation management areas (SRMAs) or (ERMAs) with a particular recreation management focus or resource challenges. See SPECIAL RECREATION MANAGEMENT AREAS.

RECREATION OPPORTUNITY SPECTRUM (ROS): A planning inventory process that provides a framework for defining classes of outdoor recreation environments, activities, and experience opportunities. In ROS, the setting, activities, and opportunities for experiences are arranged along a spectrum of six classes: primitive, semi-primitive nonmotorized, roaded natural, rural, and urban. The setting is measured by the number of people expected, producing different levels of solitude and the evidence of human use as shown by management activities and degree of development. The resulting ROS analysis defines specific geographic areas on the ground, each of which encompasses one of the six classes.

RECREATION SETTINGS: Settings described in the recreation opportunity spectrum (ROS) inventory method.

RESOURCE ADVISORY COUNCILS (RACs): Advisory councils appointed by the Secretary of the Interior and consisting of representatives of major public land interest groups (e.g., commodity industries, recreation, environmental and local area interests) in a state or smaller area. RACs advise the BLM, focusing on a full array of multiple use public land issues. RACs also help develop fundamentals for rangeland health and guidelines for livestock grazing.

RESOURCE MANGEMENT PLAN (RMP): A BLM planning document that is prepared in accord with Section 202 of FLPMA that presents systematic guidelines for making resource

management decisions for a resource area. An RMP is based on an analysis of an area's resources, its existing management, and its capability for alternative uses. RMPs are issue oriented and developed by an interdisciplinary team with public participation.

RECOGNIZED ENVIRONMENTAL CONDITION: The presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate an existing release, a past release, or threat of a release into the ground, groundwater, or surface water.

RIGHT-OF-WAY (ROW): A permit or easement that authorizes the use of lands for certain specified purposes, commonly for pipelines, roads, telephone lines or powerlines.

RIGHT-OF-WAY CORRIDOR: A parcel of land that has been identified by law, Secretarial order, through a land use plan or by other management decision as being the preferred location for existing and future right-of-way grants and suitable to accommodate one type of right-of-way or one or more rights-of-way which are similar, identical or compatible.

RIPARIAN: Pertaining to or situated on or along the bank of streams, lakes, and reservoirs.

RIPARIAN AREA: Riparian areas are the green, vegetated areas on each side of streams and rivers. They serve many important functions, including purifying water by removing sediments and other contaminants; reducing the risk of flooding and associated damage; reducing stream channel and streambank erosion; increasing available water and stream flow duration by holding water in stream banks and aquifers; supporting a diversity of plant and wildlife species; maintaining a habitat for healthy fish populations; providing water, forage, and shade for wildlife and livestock; and creating opportunities for recreationists to fish, camp, picnic, and enjoy other activities. They can be a form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack riparian vegetation and depend on free water in the soil.

ROAD: As used herein (a linear route), a transportation facility used primarily by vehicles having four or more wheels, documented as such by the owner, and maintained* for regular and continuous use. Also see MAINTENANCE.

ROADSIDE: A general term denoting the area adjoining the outer edge of the road.

ROCK CRAWLING: The use of specialized motor vehicles for the purpose of traversing difficult terrain. Also known as Extreme Technical Trail driving.

ROCKHOUNDING: The free collection of rock, mineral and semi-precious gemstones, invertebrate fossils, and petrified wood in reasonable amounts. BLM Arizona defines reasonable limits for personal use as up to 25 pounds per day, plus one piece, with a total of 250 pounds per person, per year. Rockhounding does not include removal aid by motorized mechanical devices, including heavy equipment or explosives.

ROUTE: any motorized, non-motorized, or mechanized transportation corridor. Corridor may either be terrestrial or a waterway. "Roads," "trails," and/or "ways" are considered routes.

RUNOFF: The portion of a drainage area's precipitation that flows from the area.

R.S. 2477: Revised Statute 2477 was enacted as part of the Mining Law of 1866, during a time when the federal government's focus was on encouraging settlement and development of the West. Congress passed R.S. 2477 to ensure miners' routes to their claims and cattlemen's trails for their herds by granting rights-of-way over any federal land not otherwise set aside. Although Congress repealed the statute in 1976 with the Federal Land Policy and Management Act, it did not terminate rights-of-way in existence at that time. As part of the new law in 1976, Congress recognized all valid existing claims to these rights-of-way as of that date.

S

SALEABLE MINERALS: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed by sales or special permits to local governments. See also **MINERAL MATERIALS**.

SCIENTIFIC USE: This category applies to any cultural property determined to be available for consideration as the subject of scientific or historical study at the present time, using currently available research techniques. Study indicates methods that would result in the property's physical alteration or destruction. This category applies almost entirely to prehistoric and historic archaeological properties, where this method of use is generally archaeological excavation, controlled surface collection, and/or controlled recordation (data recovery). Recommendation to allocate individual properties to this use must be based on documentation of the kinds of data the property is thought to contain and the data's importance for pursuing specific research topics.

SCOPING: An early and open process for determining the scope of issues to be addressed in an environmental impact statement and the significant issues related to a proposed action.

SHOULDER: The portion of the roadway contiguous to the travelway for accommodation of stopped vehicles.

SEASONAL GRAZING: Grazing restricted to a specific season.

SECTION: 640 acres or 1 square mile.

SECTION 404 PERMIT: A permit required by the Clean Water Act, under specified circumstances, when dredge or fill material is placed in the waters of the United States, including wetlands.

SECTION 7 CONSULTATION: The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

SEDIMENT: Solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water. Sediment includes chemical and biochemical precipitates and decomposed organic material such as humus.

SENSITIVE SPECIES: All species that are under status review, have small or declining populations, live in unique habitats, or need special management. Sensitive species include

threatened, endangered, and proposed species that are classified by the U.S. Fish and Wildlife Service.

SIKES ACT OF 1974: A federal law that promoted federal-state cooperation in managing wildlife habitats on both BLM and Forest Service lands. The act required BLM to work with state wildlife agencies to plan the development and maintenance of wildlife habitats and had as its main tool, the habitat management plan.

SIMULTANEOUS DOUBLE COUNT: A census technique to estimate animal populations. The technique uses tandem observers counting groups of animals on the same transect.

SOCIO-CULTURAL USE: A social and/or cultural group perceives that a cultural resource, place, structure or geographic location has characteristics which help to maintain the group's heritage or identity.

SOIL MOISTURE: The water content stored in a soil.

SOIL PRODUCTIVITY: The capacity of a soil in its normal environment to produce a specified plant or sequence of plants under a specified system of management.

SPECIAL CULTURAL RESOURCE MANAGEMENT AREA: An area containing cultural resources (e.g., archaeological sites, historic sites or places of traditional cultural importance) that are particularly important for public use, scientific use, traditional use, or other uses as defined in BLM Manual 8110.4.identified

SPECIAL DESIGNATED AREA: These are nationally recognized land use designations for protection of one or more sensitive resources. Designations may include Areas of Critical Environmental Concern, Back Country Byways, Wild and Scenic Rivers, Wilderness Areas, and Wilderness Study Areas.

SPECIAL RECREATION PERMIT (SRP): An authorization that allows for specific nonexclusive permitted recreational uses of the public lands and related waters. SRPs are issued to control visitor use, protect recreational and natural resources, provide for the health and safety of visitors, and accommodate commercial recreational uses.

SPLIT-ESTATE: Land whose surface rights and mineral rights are owned by different entities.

SPECIAL STATUS SPECIES: Plant or animal species listed as endangered, threatened, candidate or sensitive by federal or state governments.

SPECIAL VEHICLE RECREATION ACTIVITIES: Recreation activities that require special, custom, modified, usually motorized OHV equipment that involves site specific landscape elements required for a specialized sport. Examples include: rock crawling and motorcycle trials.

SPUR: A route that exists for a unique use, such as access to a specific use or feature. Uses include, but are not limited to recreational and commercial. Features include, but are not limited to, campsites, mines or range developments. A spur route is connected to a designated route. Spur routes should be designated in the transportation plan.

STAKEHOLDERS(S): A person, party, group, organization, or agency interested either through ownership, management jurisdiction, share, or socioeconomic reliance in a location, area, or specific resource.

STAGING AREA: An area where participants in an activity gather and make final preparations for the activity.

STANDARDS AND GUIDELINES FOR RANGELAND HEALTH: See *Arizona Standards for Rangeland Health* and *Guidelines for Grazing Administration*.

STATE HISTORIC PRESERVATION OFFICER (SHPO): The official within and authorized by each state at the request of the Secretary of the Interior to act as liaison for the National Historic Preservation Act. Also see NATIONAL HISTORIC PRESERVATION ACT.

STATE LANDS: See STATE TRUST LANDS.

STATE TRUST LANDS: Lands granted to Arizona by the Federal government at territorial establishment and at statehood. Totaling 10.9 million acres, these lands are managed by the Arizona State Land Department to yield revenue over the long term for the 14 trust beneficiaries. The chief beneficiary consists of the public schools. Whenever Arizona sells or leases these lands and their natural resources, it must pay the beneficiaries. Revenues from land sales are maintained in a permanent fund managed by the State Treasurer, and interest from this fund is paid to the beneficiaries.

STREAMBANK: The portion of a stream channel that restricts the sideward movement of water at normal water levels. The streambank's gradient often exceeds 45° and exhibits a distinct break in slope from the stream bottom.

STREAMBANK STABILITY: A streambank's relative resistance to erosion, which is measured as a percentage of alteration to streambanks.

SUCCULENTS: Plants such as cacti that have fleshy tissues designed to conserve moisture.

SURFACE OCCUPANCY: See NO SURFACE OCCUPANCY.

T

TAILINGS: The waste matter from ore after the extraction of economically recoverable metals and minerals.

TAKE: As defined by the Endangered Species Act, "to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct."

TARGET SPECIES: Plant species to be reduced or eliminated by a vegetation treatment. Also see VEGETATION TREATMENTS.

TERRESTRIAL SPECIES: Ground dwelling plants and animals.

THREATENED SPECIES: Any plant or animal species likely to become endangered within the foreseeable future throughout all or part of its range and designated by the U.S. Fish and Wildlife Service under the Endangered Species Act. Also see ENDANGERED SPECIES.

TITLE 5: That section of the Federal Land Policy and Management Act that allows BLM to authorize certain types of rights-of-way.

TRADITIONAL LIFEWAY VALUE: The quality of being useful to the maintenance of a specified social and/or cultural group's traditional systems of 1) religious belief, 2) cultural practice, or 3) social interaction, not closely identified with definite locations. Another group's shared values are abstract, nonmaterial, ascribed ideas that one cannot know about without being told.

TRADITIONAL USE: This category is to be applied to any cultural resource that is perceived by a specified social and/or cultural group as having attributes that contribute to maintaining the heritage or existence of that group. This use category signifies that the cultural resource is to be managed in a way that takes those attributes into account, as applicable.

TRAIL: (Interagency definition): linear route managed for human powered, stock, or off-highway vehicle forms of recreation or for historic or heritage values. Trails are not generally managed for use by four wheel drive or high clearance vehicles.

TRAILHEAD: The terminus of a hiking, horse, or bicycle trail, accessible by motor vehicle and sometimes having parking, signs, a visitor register, and camping and sanitary facilities.

TRAVEL MANAGEMENT NETWORK: A system that addresses access requirements to public lands. This includes, but is not limited to: Title 5 rightsofway, RS 2477 Roads, OHV routes, county maintained roads, trails (hiking, equestrian, bike, and vehicular), authorized or permitted uses (ranchers, miners, and other agencies), and ADA needs. The network aims to also improve the lack of legal access to public lands over private or state lands.

TREAD LIGHTLY: A not-for-profit organization whose mission is to increase awareness of ways to enjoy the great outdoors while minimizing human impacts.

U

UNIQUE FARMLAND: As defined by the Farmland Protection Policy Act of 1981, land other than prime farmland that is used for producing specific high-value food and fiber crops, as determined by the Secretary of Agriculture. Unique farmland has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables. Also see PRIME FARMLAND.

UNAUTHORIZED USE: Any use of the public lands not authorized or permitted.

USER ETHIC: All visitors arrive at the public lands with a set of perceptions, habits, activities, and values, which, based upon their socialization, they determine to be appropriate or inappropriate behaviors. These ethics change over time, by region of the country, and by group affiliation/norms. Some ethics are less impacting to the natural setting. When a user group or

subset of a user group is observed to demonstrate a poor user ethic, it may be valuable to provide information and interpretation in order to seek a change in user ethic.

UPLANDS: Lands at higher elevations than the alluvial plain or low stream terrace; all lands outside the riparian-wetland and aquatic zones.

V

VACATION SITE: A recreational location, temporary in nature, with limited occupancy periods.

VANDALISM (CULTURAL RESOURCE): The unauthorized collecting, excavating, or defacing of cultural resources.

VALID EXISTING RIGHTS: Locatable mineral development rights that existed when FLPMA was enacted in 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located on segregated lands requires BLM to conduct a valid existing rights determination.

VECTOR: An agent capable of transmitting a pathogen from one organism to another either mechanically as a carrier (e.g., as houseflies that transport typhoid bacteria) or biologically by playing a specific role in the life cycle of the pathogen (e.g., as mosquitoes in relation to the malaria parasite).

VEGETATION TREATMENTS: Treatments that improve vegetation condition or production. Such treatments may include seedings; prescribed burning; or chemical, mechanical, and biological plant control.

VENDING: the sale of goods or services, not from a permanent structure, associated with recreation on the public lands or related waters, such as food, beverages, clothing, firewood, souvenirs, photographs, or film (video or still), or equipment repairs.

VERTICAL MULCHING: A reclamation strategy, designed to conform with adjacent vegetation and terrain, for restoring roads, trails, and other disturbed areas in desert tortoise and other sensitive species' habitats. This technique involves the placement of structure (live vegetation, rocks, dead shrubs and "snags," bunchgrasses, and various woody materials) within the confines of the treatment area, both on the ground surface and in a vertical manner.

VIEWSHED: The entire area visible from a viewpoint.

VISITOR DAY: 12 visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more people.

VISITOR SERVICES: The delivery, to the visiting public, of use information, interpretation and use rules. Visitor services may be provided in written form (maps and brochures), signing or the direct face-to-face contact with a BLM Park Ranger or other visitor services staff. Emergency services and visitor assistance are also included as visitor services. The goal of

visitor services is to improve the visitor experience, provide a BLM presence, and protect the resource.

VISUAL ASPECT: The visual first impression of vegetation at a particular time or seen from a specific point.

VISUAL RESOURCE MANAGEMENT (VRM): A BLM developed system used to evaluate the visual resources of a given area to determine what degree of protection, rehabilitation, or enhancement is desirable and possible.

W, **X**, **Y**, **Z**

WASH: A channel or miniature valley cut by concentrated runoff but through which water commonly flows only during and immediately after heavy rains, or while snow is melting.

WATERSHED (CATCHMENT): A topographically delineated area that is drained by a stream system, that is, the total land area above some point on a stream or river that drains water past that point. The watershed is a hydrologic unit often used as a physical-biological unit and a socioeconomic-political unit for planning and managing natural resources.

WATERSHED CONDITION (WATERSHED HEALTH): The comparison of watershed processes to normal or expected measurements of properties such as soil cover, erosion rate, runoff rate, and groundwater table elevation; an assessment or categorization of an area by erosion conditions, erosion hazards, and the soil moisture/temperature regime.

WATERSHED FUNCTION: The combination of processes attributed to watersheds as part of the hydrologic cycle including interception of rain by plants, rocks, and litter; surface storage by the soil; groundwater storage; stream channel storage; soil evaporation; plant transpiration; and runoff. These processes affect the following properties of the watershed: runoff rate, water infiltration rate, soil building rate, soil erosion rate, groundwater recharge rate, groundwater discharge rate, water table elevation, and surface water discharge. These properties in turn affect plant communities through soil attributes, including soil parent material, soil moisture, and nutrients; stream and rivers through flooding duration and magnitude; and sediment load, which structures the dimension, pattern, and profile of channels; and lakes and reservoirs through sedimentation and nutrient input.

WAY: As used herein, a road-like feature used by vehicles having four or more wheels, but not declared a road by the owner and which receives no maintenance to guarantee regular and continuous use.

WETLAND: An area that is inundated or saturated by surface- or ground water often and long enough to support a prevalence of vegetation typically adapted for life in saturated soil. Wetlands include marshes, shallows, lakeshores, cienegas, and riparian areas.

WILD AND SCENIC RIVER CORRIDOR: See NATIONAL WILD AND SCENIC RIVER SYSTEM.

WITHDRAWAL: As defined in FLPMA: "Withholding an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or

reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of Federal land, other than 'property' governed by the Federal Property and Administrative Services Act, as amended (40 U.S.C. 471) from one department, bureau or agency to another department, bureau or agency."

WILD HORSE AND BURROS: All unbranded and unclaimed horses and burros using public lands as all or part of their habitat.

WILDERNESS: Area designated by Congress to protect their wilderness values or characteristics as described under the Wilderness Act of 1964.

WILDERNESS CHARACTERISTICS: features of the land and are specifically identified in BLM Instruction Memorandum (IM) No. 2003-275 – Change 1 as naturalness, solitude and primitive/unconfined recreation.

WILDERNESS STUDY AREA: A roadless area of public lands that the BLM has determined possesses the wilderness qualities described in the Wilderness Act of 1964. The Wilderness Study Area (WSA) system was established under Section 603 of FLPMA as a means of identifying for Congress those public lands that possess wilderness characteristics described by the Wilderness Act of 1964. Congress can designate WSAs, release them from study status, or maintain their wilderness study status.

WILDFIRE: Any wildland fire that is not meeting management objectives and therefore requires a suppression response.

WILDLAND FIRE: Any non-structure fire, other than prescribed fire, that occurs in the wildland.

WILDLAND-URBAN INTERFACE (WUI): Areas where urban fuels directly meet natural fuels. This is primarily within 20–60 meters (66–200 feet) of houses, where fire most directly threatens the house, and where a defensible zone can be developed.

WILDLIFE: A broad term that includes birds, reptiles, amphibians, and non-domesticated mammals.

WILDLIFE HABITAT MANAGEMENT AREAS (WHMAs): General areas that are managed to enhance the habitat of one or more specific wildlife species. These areas were previously called Priority Wildlife Habitat.

WITHDRAWAL: An action that restricts the disposition of public lands and holds them for specific public purposes; public lands that have been dedicated to public purpose. Also see MINERAL WITHDRAWAL.

Acronyms and Abbreviations

A&Ws aquatic and warm water fisheries

ACEC Area of Critical Environmental Concern

ADA Americans with Disabilities Act

ADEQ Arizona Department of Environmental Quality

ADOT Arizona Department of Transportation
AGFD Arizona Game and Fish Department

AgL agriculture for irrigation and livestock watering

AIRFA American Indian Religious Freedom Act

AML Appropriate Management Level

ARPA Archaeological Resources Protection Act

ASLD Arizona State Land Department

ATV all-terrain vehicle
AUM Animal Unit Month

AZLUP Arizona Statewide Land Use Plan Amendment for Fire, Fuels

and Air Quality Management

BE Biological Evaluation

BLM Bureau of Land Management BOR U.S. Bureau of Reclamation

BTU British Thermal Unit
CAP Central Arizona Project
CCC Civilian Conservation Corps

CDCA California Desert Conservation Area
CDFG California Department of Fish and Game
CEQ U.S. Council on Environmental Quality

CFR Code of Federal Regulations

cfs cubic feet per second CMD Cienega Mining District

CO carbon monoxide

Corps U.S. Army Corps of Engineers
CSP concentrating solar power

CYL cattle year-long

DOI Department of the Interior
DPC Desired Plant Community
DWS domestic water supply

EA Environmental Assessment

EIS Environmental Impact Statement

EJ Environmental Justice

EPA U.S. Environmental Protection Agency

ESA Endangered Species Act

F Fahrenheit

FBC full body contact recreation

FC fish consumption

FCR field contact representative

FLPMA Federal Land Policy and Management Act

FONSI Finding of No Significant Impact

FR Federal Register

FUDS Formerly Used Defense Sites

FUP Free Use Permit

GIS Geographic Information Systems

HA Herd Area

HAZMAT hazardous material
HMA Herd Management Area
HMP Habitat Management Plan

I-10 Interstate 10 I-40 Interstate 40

IM BLM Instruction Memorandum

ISTEA Intermodal Surface Transportation Efficiency Act of 1991

Ka thousand years ago KOP Key Observation Point

KRMP Kingman Resource Area Resource Management Plan

kWh/m²/day kilowatt-hours per square meter per day

LGNMFP Lower Gila North Management Framework Plan LGSRMP Lower Gila South Resource Management Plan

LHFO Lake Havasu Field Office
LRU Land Resource Unit
LTVA Long-Term Visitor Area

LUP Land Use Plan

LWCF Land and Water Conservation Fund

Ma million years ago

MDAQMD Mohave Desert Air Quality Management District

mg/l milligrams per liter

mmbtu million British Thermal Units
MOA Memorandum of Agreement
MOU Memorandum of Understanding

MPO Mining Plan of Operations

msl mean sea level MU Management Unit

MW megawatt

MWD Metropolitan Water District of Southern California

MWh/yr megawatt hours per year

MSCP Multiple Species Conservation Plan NAAQS National Ambient Air Quality Standards

NAGPRA Native American Graves Protection and Repatriation Act

NECO Plan Northern and Eastern Colorado Desert Coordinated

Management Plan

NEPA National Environmental Policy Act NHPA National Historic Preservation Act

NOI Notice of Intent NO_x oxides of nitrogen

NPDES National Pollutant Discharge Elimination Act
NRCS Natural Resources Conservation Service

NSA Natural Scenic Area

 O_3 ozone

OHV off-highway vehicle P/E perennial/ephemeral

PCPI per capita personal income PFC proper functioning condition

PG&E Pacific Gas & Electric
PILT Payment in Lieu of Taxes

PLO Public Land Order

PM10 particulate matter 10 microns or less in diameter

PV photovoltaic

R&PP Recreation and Public Purposes Act

RAC Resource Advisory Council

RFD reasonable foreseeable development

RMA Riparian Management Area
RMP Resource Management Plan
RMZ Recreation Management Zone

ROD Record of Decision

ROS Recreation Opportunity Spectrum

ROW right-of-way
RS Revised Statute

RUP Recreation Use Permit RV recreational vehicle

SARA Park Special Activities Recreational Area Park

SHPO State Historic Preservation Office

SIP State Implementation Plan

SO₂ sulfur dioxide SR State Route

SRMA Special Recreation Management Area

SRP Special Recreation Permit

Standards

and Guidelines Arizona Standards for Rangeland Health and Guidelines for

Grazing Administration

SWRCB California State Water Resource Control Board

T&E threatened and endangered (species)

TDS total dissolved solids

TMN Travel Management Network

TPI total personal income
USC United States Code
USFS U.S. Forest Service

USFWS U.S. Fish and Wildlife Service

UXO unexploded ordnance

VOC volatile organic compound VRM Visual Resource Management

WHA Wildlife Habitat Area

WHMA Wildlife Habitat Management Area
WROS Water Recreation Opportunity Spectrum

WSA Wilderness Study Area
WUG Western Utility Group
WUI Wildland-Urban Interface

YRMP Yuma District Resource Management Plan

References Cited

Copies of the documents in this reference section are available for public review in the Lake Havasu Field Office.

Printed References

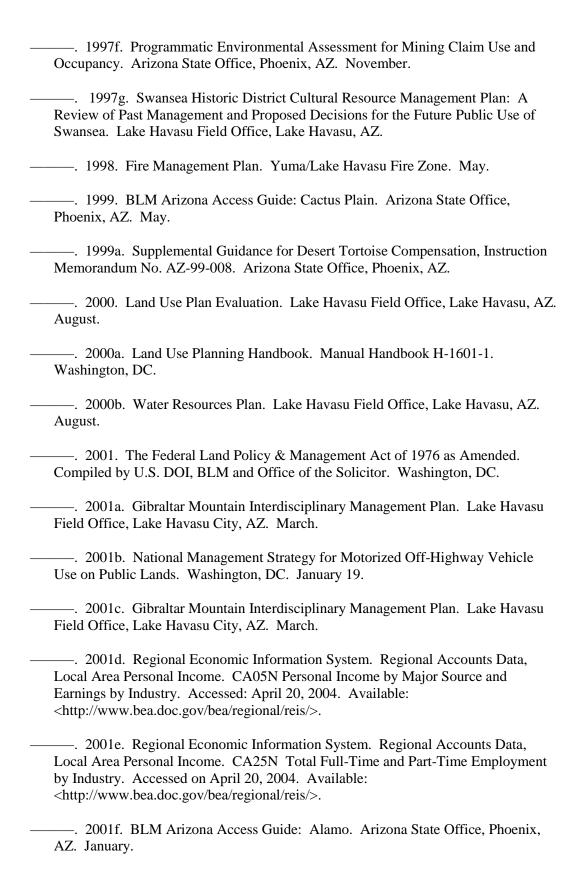
- Adams, R.A. 2003. *Bats of the Rocky Mountain West: Natural History, Ecology, and Conservation*. Boulder, CO: University Press of Colorado. 289 pp.
- Agenbroad, L.D., J.I. Mead, and R.E. Reynolds. 1992. Mammoths in the Colorado River Corridor. San Bernardino County Museum Association Special Publication 92-2. San Bernardino, CA.
- Alto, B.R., W.H. Lee, and M. Throckmorton. 1982. Lands Classified Prospectively Valuable for Geothermal Resources. Prepared for Bureau of Land Management, Arizona State Office. Scale 1:500,000.
- American Rivers. 2004. Endangered Rivers 2004, #1 Colorado River. Available: http://www.americanrivers.org/site/DocServer/colorado.pdf?docID=440>
- Anderson, B.E. 2001. The Socio-Economic Impacts of the Lake Havasu Fisheries Improvement Program: Submitted to the Bureau of Land Management, Lake Havasu City, AZ. Anderson & Associates, Durango, CO. October.
- Arizona Agricultural Statistics Service. 2002. 2002 Annual Statistics Bulletin. Available: http://www.nass.usda.gov/az/02bul/pdf/pg15.pdf>. Accessed May 20, 2004.
- Arizona Department of Environmental Quality. 1996. Arizona Water Quality Assessment. Available: http://www.azdeq.gov/environ/water/index.html>.
- ——. 1998. Arizona Water Quality Assessment. Available: http://www.azdeq.gov/environ/water/index.html>.
- ——. 2002. Monitoring and Assessment: Draft 2004 305(b) Water Quality Assessment Report And 303(d) Impaired Waters List. Available: http://www.adeq.state.az.us/environ/water/assessment/305-04.html>.
- ——. 2002a. The Status of Water Quality in Arizona. Available: http://www.azdeq.gov/environ/water/index.html>.

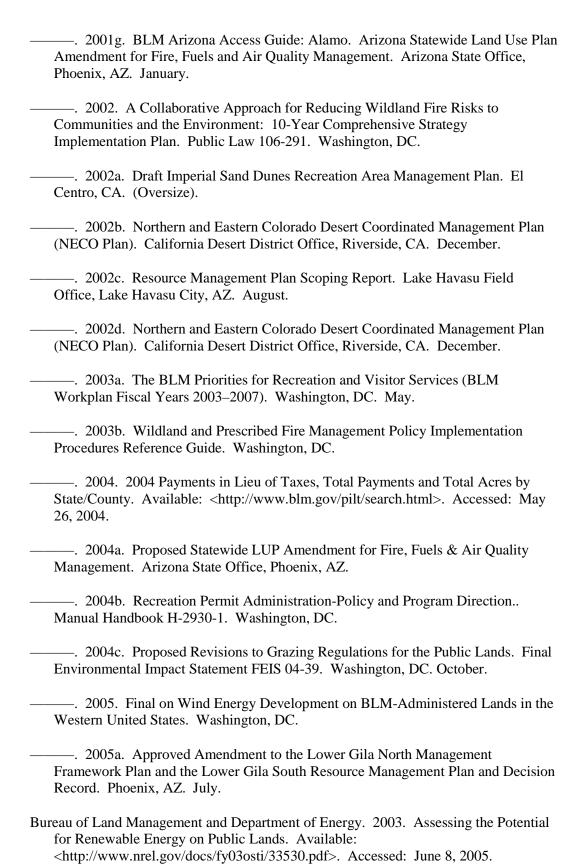
- ———. 2004. Arizona Air Quality Plans. Available: www.adeq.state.az.us/index.html.
- ——. 2004a. Arizona Water Quality. Available: <www.adeq.state.az.us>.
- Arizona Desert Bighorn Sheep Society. 2004. Economic Profiles for Arizona Counties. Available: www.wilderness.org>.
- Arizona Game and Fish Department 2001. Arizona Watercraft Strategic Plan. Available: http://www.gf.state.az.us/>.
- ——. 1993. Wildlife 2006—The Arizona Game and Fish Department's Wildlife Management Program Strategic Plan for the years 2001-2006. Approved by the AGFD Commission January 19, 2001. 91 pp. Available: <www.azgfd.com>.
- ——. 2003. Arizona 2003 Boating Fuel Survey. Available: <www.azgfd.com>.
- Arizona Interagency Desert Tortoise Team. 1996. Management Plan for the Sonoran Desert Population of the Desert Tortoise in Arizona. Arizona Interagency Desert Tortoise Team. Phoenix, AZ. December.
- Arizona Leisure. 2005. Lakes in Arizona. Available: <www.arizona-leisure.com/Arizona-lakes.html>.
- Arizona State Parks Board. Arizona Statewide Comprehensive Outdoor Recreation Plan(s). (SCORP) 1994 and 2003. Arizona State Parks Board, Arizona State Parks Partnerships Division. Phoenix, AZ.
- Arizona Trails 2000. 1999 State Motorized and Nonmotorized Trails Plan(s). Arizona State Parks Board, Arizona State Parks, Partnerships Division. Phoenix, AZ.
- Arizona Trails 2005. 2004 State Motorized and Nonmotorized Trails Plan(s). Arizona State Parks Board, Arizona State Parks, Partnerships Division. Pheonix, AZ.
- Arizona Wilderness Coalition. 2003. Wilderness and General Management Proposals to The Bureau of Land Management Lake Havasu Field Office. Lake Havasu, AZ.
- Andrews, B.J., K.A. King, and D.L Baker. 1997. Environmental Contaminants in Fish and Wildlife of Havasu National Wildlife Refuge. 1997. U.S. Fish and Wildlife Service. Phoenix, AZ.
- Bevens, H.E., S.L. Goodbred, J.F. Miesner, S.A. Watkins, T.S. Gross, N.D. Denslow, and T. Schoeb. 1996. Synthetic organic compounds and carp endocrinology and histology in Las Vegas Wash and Las Vegas and Callville Bays of Lake Mead, Nevada, 1992 and 1995. U.S. Geological Survey. Water Resources Investigation Report 96-4266. 12 pp.
- Bishop, C.C. 1963. Geologic map of California: Needles Sheet. California Division of Mines and Geology, scale 1:250000.

- Blodgett, Steve, M.S. 2004. Environmental Impacts of Aggregate and Stone Mining, New Mexico Case Study. Center for Science in Public Participation, Bozeman, MT. January.
- Boarman, W I., M. Sazaki, and W.B. Jennings. 1997. The effect of roads, barrier fences, and culverts on desert tortoise populations in California, USA. In: J. Van Abbema (ed.), Proceedings: Conservation, Restoration, and Management of Tortoises and Turtles—An International Conference, pp. 54–58. July 1993, State University of New York, Purchase. New York Turtle and Tortoise Society, New York.
- Brown, D.E. 1982. Biotic Communities of the American Southwest United States and Mexico. *Desert Plants* 4: (1-4) 1-342.
- Brown, J.K. 2000. Chapter 9: Ecological Principles, Shifting Fire Regimes and Management Considerations. Pp. 185–203 In: Brown, James K. and Smith, Jane K., eds. 2000. Wildland fire in ecosystems: Effects of fire on flora. Gen.Tech. Rep. RMRS-GTR-42-Vol. 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p.
- Buising, A.V. 1992. The Bouse Formation and Bracketing Units, Southern California and Western Arizona. In: San Bernardino County Museum Association Special Publication 92-2. San Bernardino County, CA.
- Bureau of Economic Analysis. 2000. Regional Economic Information System. Bearfacts 1990–2000. Accessed on April 20, 2004. Available: http://www.bea.doc.gov/bea/regional/bearfacts./.
- Bureau of Labor Statistics. 2001. Current Population Survey, Frequently Asked Questions. October. Accessed on April 22, 2004. Available: http://www.bls.gov/cps/cps_faq.htm.
- Bureau of Labor Statistics, U.S. Department of Labor. 2002. National Unemployment Rate, and State and Local Unemployment Rates. Accessed on April 22, 2004. Available: http://www.bls.gov/.
- Bureau of Land Management. 1973. Yuma District Havasu Planning Unit Management. May 2003. The BLM's Priorities for Recreation and Visitor Services. U.S. Department of the Interior Framework Plan, 1608.41 Lands. Yuma District Office, Yuma, AZ.
- ——. 1977. Alamo Interim Herd Management Area Plan. Phoenix District Office, Phoenix, AZ.
- ———. 1980. Parker Strip Recreation Management Plan. Yuma District Office, Yuma, AZ.
- ——. 1980a. Wilderness Review Arizona, Intensive Inventory of Public Lands Administered by Bureau of Land Management, Decision Report Arizona State Office, AZ.

——. 1982. Final Environmental Impact Statement, Proposed Grazing Management
Program for the Lower Gila North EIS Area. Phoenix District Office, Phoenix, AZ.
——. 1983. Lower Gila North Management Framework Plan. Phoenix District Office, Phoenix, AZ. March.
——. 1984. Departmental Manual, Part 613. September 25, 1984. Washington, DC.
——. 1986. Visual Resource Contrast Rating, BLM Manual H-8431-1, Release 8-30, Washington, DC.
——. 1987. Final Yuma District Resource Management Plan and Environmental Impact Statement. Yuma District Office, Yuma, AZ. August.
——. 1987a. Renewable Resource Improvement and Treatment Guidelines and Procedures. BLM Manual Handbook H-1740-1. Washington, DC.
——. 1988. Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan. Washington, DC.
——. 1988a. Bill Williams Riparian Management Area Findings and Interim Management Recommendation, Yuma District Office, Yuma, AZ.
——. 1988b. Lower Gila South Resource Management Plan and Environmental Impact Statement. Phoenix District Office, Phoenix, AZ. August.
——. 1988c. National Environmental Policy Act Handbook. BLM Manual Handbook H-1790-1. Washington, DC.
——. 1988d. Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan. Washington, DC.
——. 1989. Bill Williams Riparian Management Area Findings and Interim Management Recommendation, Yuma District Office, Yuma, AZ.
——. 1989a. Fencing. BLM Manual Handbook H-1741-1. Washington, DC.
———. 1990. Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona, Instruction Memorandum No. AZ-91-16. Phoenix District Office, Phoenix AZ.
——. 1991. Environmental Impact Statement for Vegetation Treatments, Watersheds and Wildlife Habitats on Public Lands Administered by the BLM in the Western United States, Including Alaska. Nevada State Office, Reno, NV. May.
——. 1992. Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona: New Guidance on Compensation for the Desert Tortoise, Instruction Memorandum No. AZ-92-46. Phoenix District Office, Phoenix, AZ.

Area, Yuma District Office. Yuma, AZ. September.
——. 1993a. Byways. BLM Manual Handbook H-8357-1. Washington, DC.
——. 1993b. Wild & Scenic Rivers Suitability Assessments. Arizona State Office, Phoenix, AZ (Oversize).
——. 1994. Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement. Arizona State Office, Phoenix, AZ. December.
——. 1994a. East Cactus Plain Wilderness Management Plan. Lake Havasu Field Office, Lake Havasu City, AZ. September.
——. 1994b. Lower Gila North Management Framework Plan. Phoenix District Office, Phoenix, AZ. March.
——. 1994c. Planning Update, Amendment and Environmental Assessment to the Lower Gila North and South Management Plans. Arizona State Office, Phoenix, AZ
——. 1994d. East Cactus Plain Wilderness Management Plan. Lake Havasu Field Office, Lake Havasu City, AZ. September.
——. 1994e. Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement. Arizona State Office, Phoenix, AZ. December.
——. 1995. Kingman Resource Area Resource Management Plan and Final Environmental Impact Statement. Kingman Resource Area Office, Kingman, AZ. September.
——. 1997. Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. Arizona State Office, Phoenix, AZ. April.
——. 1997a. Biological Opinion Summary. Response to U.S. Fish & Wildlife Services' October 2, 1997 memorandum. Lake Havasu City, AZ.
— . 1997b. Swansea Historic District Cultural Resource Management Plan: A Review of Past Management and Proposed Decisions for the Future Public Use of Swansea. Lake Havasu Field Office, Lake Havasu, AZ.
——. 1997c. BLM Arizona Access Guide: Havasu. Arizona State Office, Phoenix, AZ. October.
——. 1997d. Bureau of Land Management Strategic Plan. Washington, DC. September 30.
——. 1997e. Final Arizona Statewide Wild & Scenic Rivers Study Report/Record of Decision. Arizona State Office: Phoenix, AZ.





- Bureau of Land Management and U.S. Fish and Wildlife Service. 1999. Guidance Criteria for Determinations of Effects of Grazing Permit Issuance and Renewal on Threatened and Endangered Species. Phoenix, AZ and Albuquerque, NM.
- Bureau of Land Management and USDA Forest Service. 1994. Rangeland Reform '94, Final Environmental Impact Statement. Washington, DC.
- ——. 2002. Interagency Standards for Fire and Aviation Operations. Washington, DC.
- Bureau of Land Management and Bureau of Reclamation. 1991. Memorandum of Understanding between Bureau of Land Management, Arizona State Office, and Bureau of Reclamation, Lower Colorado Region for The Management of the Lower Colorado River. Phoenix, AZ.
- Bureau of Land Management, U.S. Department of Transportation, and the State of Arizona. 2004. Agreement Number AZ-910-0417 Memorandum of Understanding Between the Department of the Interior, Bureau of Land Management, Arizona State Office, All Arizona Field Offices and U.S. Department of Transportation, Federal Highway Administration, Arizona Division Office as a Cooperating Agency and The State of Arizona, Arizona Department of Transportation as a Cooperating Agency.
- Bureau of Land Management and the State of Arizona. 2004. Agreement Number AZ-910-0306 Memorandum of Understanding Between the Department of the Interior, Bureau of Land Management, Arizona State Office, All Arizona Field Office and the State of Arizona, Arizona Game and Fish Commission as a Cooperating Agency.
- Bureau of Reclamation. 2002. Financial Feasibility Analysis for Commercial Recreation Facilities and Services: Davis Dam Lands. Aukerman & Associates. Ft. Collins, CO.
- Bureau of Reclamation, U.S. Fish and Wildlife Service, and the Metropolitan Water District of Southern California. 2004. Lower Colorado River Multi-Species Conservation Program. Volume I, II, III, IV, and V. Available: http://www.usbr.gov/lc/region/g2000/mscpdocs.html>.
- Burt, W.H., and R.P. Grossenheider. 1976. *Peterson Field Guides to the Mammals*. Boston: Houghton Mifflin Company. 289 p.
- California State Water Resources Control Board. 2005. Available: www.swrcb.ca.gov/>.
- City of Bullhead City. 2001. City of Bullhead City General Plan Update. Bullhead City, AZ: DFD.
- Code of Federal Regulations (CFRs). 2005. Electronic Code of Federal Regulations (e-CFR). January 25. Available: http://www.gpoaccess.gov/ecfr/.
- Conley, J.N., E.A. Koester, and S.L. Rauzi. 1995. Wells Drilled for Hydrocarbon, Helium, and Geothermal Resources; Stratigraphic Information and Selected Wells

- Drilled for Water. Well Location Map. Yuma and La Paz Counties, Arizona. Arizona Geological Survey in cooperation with Oil and Gas Conservation Commission. Tuscon, AZ.
- Department of Energy. 2004. Energy Efficiency and Renewable Energy. Available: http://www.eere.energy.gov/. Accessed: August 31, 2004.
- Duncan, J.T., and F.P. Mancini. 1991. Energy Resources of Arizona. Arizona Geological Survey. Tucson, AZ.
- Dunham, C. 2004. La Paz County Comprehensive Plan. August 2004 Draft. Partners for Strategic Action Inc. Fountain Hills, AZ.
- Energy Atlas. 2005. Renewable Energy Atlas of the West: A Guide to the Region's Resource Potential. Available: <www.EnergyAtlas.org>. Accessed June 8, 2005.
- EPA. 2001. National Management Measures to Control Nonpoint Source Pollution form Marinas and Recreational Boating. EPA 841-B-01-005 November 2001.
- Epple, A.O. 1995. *A Field Guide to the Plants of Arizona*. Helena, MT: Falcon Press Publishing Co., Inc. 343 pp.
- Fellows, L.D. 2005. Energy Resources in Arizona. Available: http://www.azgs.az.gov/Summer 2001.htm>.
- Glenn, J.L., R.C. Straight, and J.W. Sites, Jr. 1990. A Plasma Protein Marker for Population Genetic Studies of the Desert Tortoise (*Xerobates agassizi*). *The Great Basin Naturalist*, ISSN 0017-3614, Volume 50, No 1, 31 March 1990 pp.1–8.
- Haigler, L., C. Brook, and R. Dockter. 1981. Lands Classified Prospectively Valuable for Coal. Prepared for Bureau of Land Management, Arizona State Office. Scale 1:500,000.
- Harwell, Henry O., III. 1979. Maricopa Origins: An Ethnohistorical Approach to a Riverine Yuman Community. Ph.D. Dissertation, Department of Anthropology, Indiana University, Bloomington, IN.
- Hoffmeister, Donald F. 1986. *Mammals of Arizona*. Phoenix, AZ: University of Arizona Press.
- Hoover, Stacia L., and Michael L. Morrison. 2005. Behavior of Red-Tailed Hawks in a Wind Turbine Development. *Journal of Wildlife Management* 69(1):150-159; 2005.
- Howey, L.D., and G.B.Ruyle. 2002. Noxious Weeds I: Noxious Weeds: A Disaster Looking for a Place to Happen in Arizona!! Available: http://rangelandswest.org/az/weeds/noxiousweeds1.html>.
- Howey, L.D. and G.B.Ruyle. 2002. Noxious Weeds II: What Can You Do to Stop a Disaster in Arizona? Available: http://rangelandswest.org/az/weeds/noxiousweeds2.html>.

- Huckell, B.B. 1984. The Archaic Occupation of the Rosemont Area, Northern Santa Rita Mountains, Southeastern Arizona. Archaeological Series No. 147. Arizona State Museum, Tucson, AZ.
- Huckell, B.B. 1986. A Ground Stone Implement Quarry on the Lower Colorado River, Northwestern Arizona. Arizona BLM Cultural Resource Publication 3. Bureau of Land Management, 1986. NTIS Accession No. PB87 220232/AS. Springfield, VA.
- Hyde, P., D. Johnstone, D. Reese, and D. Frey. 1997. Regrowth of Fecal Coliforms in Swim Areas of Lake Havasu, Arizona. Arizona Department of Environmental Quality. Prepared by the Hydrologic Support and Assessment Section in cooperation with ADHS. Phoenix, AZ. 262 pp.
- Jefferson, G.T. 1991. A catalogue of late Quaternary vertebrates from California: Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports, No. 7. Los Angeles, CA.
- Keith, S.B., D.E. Gest, E. DeWitt, N. Woode Toll, and B.A. Everson. 1983. Metallic Mineral Districts and Production in Arizona. Bulletin 194. Arizona Bureau of Geology and Mineral Technology. Tucson, AZ: University of Arizona Press.
- King, K.A., D.L. Baker, W.G. Kepner, and C.T. Martinez. 1993. Trace Elements in Sediment and Fish from National Wildlife Refuges on the Colorado River, Arizona. U.S. Fish and Wildlife Service. Phoenix, AZ.
- ——. 2000. Contaminants in Potential Prey of Yuma Clapper Rail: 2000. U.S. Fish and Wildlife Service. Phoenix, AZ.
- Koester, E.A., J.N. Conley, and S.L. Rauzi. 1996. Wells Drilled for Hydrocarbon, Helium, and Geothermal Resources; Stratigraphic Information and Selected Wells Drilled for Water. Well Location Map. Mohave County, AZ. Arizona Geological Survey in cooperation with Oil and Gas Conservation Commission. Tuscon, AZ.
- Lake Havasu City. 2001. General Plan Advisory Committee. January 2002 edition. Partners for Strategic Action, Inc. Lake Havasu City, AZ.
- ——. 2001a. Lake Havasu, Arizona Draft General Plan Update. Review Draft May 2001. Partners for Strategic Action. Lake Havasu City, AZ.
- ——. 2001b. Water Resources Plan. Brown & Caldwell. Lake Havasu City, AZ.
- ——. 2002. Lake Havasu City General Plan 2001. Revised December 2004. Partners for Strategic Action, Inc. Lake Havasu City, AZ.
- ——. 2002a. Lake Havasu City General Plan 2002. Voter Ratification, November 5, 2002. Partners for Strategic Action, Inc. Lake Havasu City, AZ.
- ——. 2003. Storm Water Management Program. Lake Havasu City, AZ.

- La Paz County. 2005. La Paz County Comprehensive Plan. Revised March 2005. Adopted April 2005. La Paz County, Parker, AZ.
- Last of the Wild West. 2005. Places of Interest in the City of Lake Havasu. Available: www.lastof.com/taxland/welcometohavasu.htm>.
- Lovich, J.E., and D. Bainbridge. 1999. Anthropogenic Degradation of the Southern California Desert Ecosystem and Prospects for Natural Recovery and Restoration. *Environmental Management*. Volume 24, No. 3, pp. 309–326.
- McAuliffe, J.R. 1995. The Aftermath of Wildfire in the Sonoran Desert. *The Sonoran Quarterly* 49: 4–8.
- McLuckie, A.M., T. Lamb, C.R. Schwalbe, and R.D. McCord. 1999. Genetic and Morphometric Assessment of an Unusual Tortoise (*Gopherus agassizii*) Population in the Black Mountains of Arizona. *Journal of Herpetology*, Vol 33., No. 1, pp. 36-44.
- Marshall, R.M., S. Anderson, M. Batcher, P. Comer, S. Cornelius, R. Cox, A. Gondor, D. Gori, J. Humke, R. Paredes Aguilar, I.E. Parra, and S. Schwartz. 2000. An Ecological Analysis of Conservation Priorities in the Sonoran Desert Ecoregion. Prepared by The Nature Conservancy (Arizona Chapter), Sonoran Institute, and *Instituto del Medio Ambiente y el Desarrollo Sustentable del Estado de Sonora*, with support from Department of Defense Legacy Program and agency and institutional partners. Available:
 - http://www.sonoran.org/programs/si_sdep_program_land_cons.html.
- Mohave County. 1995. Mohave County, Arizona, General Plan. Kansas City, MO: Freilich, Leitner & Carlisle. (Oversize).
- ——. 1995a. Revised 2002. Mohave County, Arizona, General Plan. Kansas City, MO: Freilich, Leitner & Carlisle. (Oversize).
- Mohave County Trails Association, Inc. 1997. Master Plan. Kingman, AZ.
- Massey, Peter, and Jeanne Wilson. 2004. *Backcountry Adventures: Arizona*. El Cajon, CA: Sunbelt Publications.
- Mueller, G.A., and Marsh, P.C. 2002. Lost, a desert river and its native fishes: A historical perspective of the Lower Colorado River, Information and Technology Report. USGS/BRD/ITR-2002-0010, U.S. Government Printing Office, Denver, CO, 69 p.
- National Audubon Society. 1979. *Field Guide to Reptiles and Amphibians*. New York: Alfred A. Knopf. 743 p.
- National Park Service. 1997. Environmental Contaminants Encyclopedia, Gasoline General Entry. Available:
 - http://www.nature.nps.gov/hazardssafety/toxic/entry.cfm.

- ——. 1997a. Environmental Contaminants Encyclopedia, MTBE General Entry. Available: http://www.nature.nps.gov/hazardssafety/toxic/entry.cfm.
- . 1997b. Environmental Contaminants Encyclopedia, PAHS General Entry. Available: http://www.nature.nps.gov/hazardssafety/toxic/entry.cfm>.
- . 2002. Lake Mead Lake Management Plan. U.S. Department of the Interior. Available: http://www.epa.gov/fedrgstr/EPA-IMPACT/2002/July/Day-16/i17907.htm.
- National Recreation Lakes Study Commission. 1999. Final Report 1999: Reservoirs of Opportunity. Available: http://www.doi.gov/nrls/findings/final.html>.
- Natural Resource Conservation Service. 2004. Ecological Site Guides. Available: http://cals.arizona.edu/agnic/az/siteguides/guides.html. Last Revised: June 24, 2002.
- Parker Town Council & Staff, Planning & Zoning Commission. 1996. Town of Parker General Plan. Partners for Strategic Action, Inc. Fountain Hills, AZ.
- Paysen, T.E., R.J. Ansley, J.K. Brown, G.J. Gottffried, S.M. Haase, M.G. Harrington, M.G. Narog, S.S. Sackett, R.C.Wilson. 2000. Pp. 121–159 In: Brown, James K.;
 Smith, Jane Kapler, eds. 2000. Wildland fire in ecosystems: Effects of fire on flora. Gen.Tech. Rep. RMRS-GTR-42-vol. 2. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p. Ogden, UT.
- Peterson, R.T. 1990. Peterson Field Guides, A Field Guide to Western Birds. A completely New Guide to Field Marks of All Species Found in North America West of the 100th Meridian and North of Mexico. Boston: Houghton Mifflin Company. 432 p.
- Rauzi, S.L. 2001. Arizona Has Oil & Gas Potential! Arizona Geological Survey Circular 29. Arizona Geological Survey, Tucson, AZ.
- ——. 2002. Arizona Has Salt! Arizona Geological Survey Circular 30. Arizona Geological Survey, Tucson, AZ.
- Recreation Management Information System (RMIS). 2004. 2004 BLM database for recreation visitor use. Available: http://www.blm.gov/nhp/efoia/wo/fy04/im2004-113.htm.
- Reynolds, R.E. 2004. Paleontological Resource Sensitivity Map. MS. on file, BLM Lake Havasu Field Office, Lake Havasu City, AZ.
- Reynolds, R.E., and M.O. Woodburne. 2001. Review of the proboscidean datum within the Barstow Formation, Mojave Desert, California. *Journal of Vertebrate Paleontology*. Abstracts 21:93A.
- Richard, S.M., Reynolds, S.J., Spencer, J.E., and Pearthree, P.A. 2000. Geologic Map of Arizona. Arizona Geological Survey Map 35. Scale: 1:1,000,000. Tucson, AZ.

- Rogers, G.F., and J. Steele. 1981. Sonoran Desert Fire Ecology. Pp. 15–19. In: Stokes, M.A. and Dietereich, J.H., Tech. Coord., Proceedings of Fire History Workshop. U.S. Forest Service General Technical Report RM-81.
- Rogers, Malcolm J. 1939. Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas. San Diego Museum Papers. No. 3, May 1939. Reprinted by the San Diego Museum of Man 1989. San Diego, CA.
- ——. 1945. An Outline of Yuman Prehistory. *Southwestern Journal of Anthropology* 1:167–198.
- Rosenberg, K.V., R.D. Ohmart, W.C. Hunter, and B.W. Anderson. 1991. *Birds of the Lower Colorado River Valley*. Tucson, AZ: The University of Arizona Press. 416 pp.
- Rosenstock, S.S., M.J. Rabe, C.S. O'Brien, and R.B. Waddell. 2004. Studies of Wildlife Water Developments in Southwestern Arizona: Wildlife Use, Water Quality, Wildlife Diseases, Wildlife Mortalities, and Influences on Native Pollinators. Arizona Game and Fish Department, Research Branch Technical Guidance Bulletin. No. 8, Phoenix, AZ. 15 pp.
- San Bernardino County. 1969. General Plan of Parker Strip Regional Park for San Bernardino County. Joseph Bonadiman & Associates. San Bernardino, CA.
- Schwartz, S.S. ed. 2004. Proceedings of the Wind Energy and Birds/Bats Workshop: Understanding and Resolving Bird and Bat Impacts. Washington, DC. May 18–19, 2004. Prepared by RESOLVE Inc., Washington, DC. September.
- Silberman, J., Ph.D. 2003. The Importance of Fishing and Hunting. Economic Data on Fishing and Hunting for the State of Arizona and for Each Arizona County. Prepared by Arizona State University School of Management for the Arizona Game and Fish Department Available:

 http://www.azgfd.com/pdfs/wildlife_conservation/FISHING_HUNTING
 %20rEPORT.pdf>.
- Sibley, D.A. 2003. *The Sibley Field Guide to Birds of Western North America*. Alfred A. Knopf, New York. 474 p.
- Skagen, S.K., Melcher, C.P., and Hazlewood, R. 2004. Migration Stopover Ecology of Western Avian Populations: A Southwestern Migration Workshop. U.S. Geological Survey, Biological Resources Discipline, Open-File Report 2004–1452, 29 p.
- Sonoran Institute. 2004. Economic Profile System, April 2004. Population, Employment, Earnings and Personal Income Trends. Software program that utilizes data from the Decennial Census of Population and Housing, Bureau of the Census; Regional Economic Information System, Bureau of Economic Analysis; Bureau of Labor Statistics; and County Business Patterns, Bureau of the Census. Tuscon, AZ.

- Spencer, J.E., and S.J. Reynolds, eds. 1989. Geology and Mineral Resources of the Buckskin and Rawhide Mountains, West-Central Arizona. Arizona Geological Survey Bulletin 198 (Shackelford Volume). Tuscon, AZ.
- Stipp, T.F., and R. Dockter. 1987. Lands Classified Known to be Valuable and Prospectively Valuable for Oil and Gas. Prepared for Bureau of Land Management, Arizona State Office. Scale 1:500,000.
- Stone, Connie L. 1991. *The Linear Oasis: Managing Cultural Resources Along the Lower Colorado River*. Arizona BLM Cultural Resource Publication 6. Bureau of Land Management, 1991. NTIS Accession No. PB92-155027. Springfield, VA.
- Swetnam, T.W., and C.H. Baisan. 1996. Historic Fire Regime Patterns in the Southwestern United States Since AD 1700. Pp. 11–32 In: Allen, C.D., ed., Fire effects in southwestern forests: Proceedings of the second La Mesa Fire Symposium. General Technical Report RB-GTR-286, USDA, Rocky Mountain Forest and Range Experiment Station. Fort Collins, CO.
- Tosdal, R.M., Eppinger, R.G., Erdman, J.A., Hanna, W.F., Pitkin, J.A., Blank, Jr., H.R.,
 O'Leary R.M., Watterson, J.R., and Kreidler, T.J. 1990. Mineral Resources on the
 Cactus Plain and East Cactus Plain Wilderness Study Areas, La Paz County, Arizona.
 U.S. Geological Survey Bulletin 1704-D. United States Government Printing Office,
 Washington, DC.
- Turner, R.M., and D.E. Brown. 1982. 154.1 Sonoran desertscrub. Pages 157–222 In: D.E. Brown, ed. Biotic communities of the American southwest—United States and Mexico. Desert Plants 4.
- U.S. Census Bureau. 1990a. 1990 Census of Population and Housing Summary Tape File 1 (100% data). Available: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_ds_name=DEC_1990STF3 & program=DEC& lang=en>. Accessed: April 19, 2004.
- ——. 1990b. 1990 Census of Population and Housing, Summary Tape File 3 (Sample Data). Available: http://factfinder.census.gov/servlet/DatasetMainPageServlet?_ds_name=DEC_1990
- ——. 2000a. Table DP-1. Profile of General Demographic Characteristics: 2000. Available: http://censtats.census.gov/pub/Profiles.shtml>. Accessed: April 16, 2004.

STF3&_program=DEC&_lang=en>. Accessed: April 26, 2004.

- ——. 2000b. Table DP-3. Profile of Selected Economic Characteristics: 2000. Available: http://censtats.census.gov/pub/Profiles.shtml>. Accessed: April 16, 2004.
- ——. 2000c. Table DP-4. Profile of Selected Housing Characteristics: 2000. Available: http://censtats.census.gov/pub/Profiles.shtml. Accessed: April 16, 2004.

- U.S. Department of the Interior. 1964. Lower Colorado River Land Use Plan. Washington, DC. January.
- . 1990. Colorado River Floodway Maps, Public Law 99-450. Washington, DC.
- U.S. Fish and Wildlife Service. 1997. Biological Opinion for the Lower Gila Resource Area Amendment. Arizona Ecological Services Field Office. Phoenix, AZ.
- ——. 2004. Management Plan for the Big-River Fishes of the Lower Colorado River Basin: Amendment and supplement to the Bonytail, Humpback Chub, Colorado Pikeminnow, and Razorback Sucker Recovery Plans. Arizona Ecological Services Field Office. Phoenix, AZ.
- U.S. Geological Survey. 1956. Reservoirs in the United States. Geological Survey Water Supply Paper 1360-A. 99 p.
- ——. 2004. Water Resources Data, Arizona, Water Year 2003, Department of the Interior. 326 p.
- Vallentine, J.F. 1980. *Range Development and Improvements*. 2nd ed. Provo, UT: Brigham Young University Press.
- Van Mouwerik, M. 2000. Water Quality Concerns Related to Personal Watercraft Usage. Natural Resources Year in Review. National Park Service, Department of the Interior. Natural Resource Program Center, Fort Collins, CO.
- The Wilderness Society. 2000. Economic Profiles for Arizona Counties; Mohave County. Available: <www.wilderness.org>.
- Western Regional Climate Center. 2004. Arizona Climate Summaries. Available: http://www.wrcc.dri.edu/summary/climsmaz.html>.
- Woods, L.J., J. MacAller, J.L. Smeltzer., R.A. Murray, P. Rosen, C. Schwalbe, Hare, Trevor, and Contributors. 2004. Habitat Management Guidelines for Amphibians and Reptiles of the Arid Southwest. Partners in Amphibian and Reptile Conservation. Technical Publication HMG-4. Tucson, AZ. 100 pp.
- Zeng, E., and C. Vista. 1995. Compositional Indices of Polycyclic Aromatic Hydrocarbon Sources off San Diego, California. Available: ftp://ftp.sccwrp.org/pub/download/PDFs/1994 95ANNUALREPORT/ar04.pdf>.

Personal Communications

Bates, Christine. Renewable Resource Advisor. Colorado River District Office, Bureau of Land Management. Field surveys for Desert Tortoise (surveyed 2004), Yuma Clapper Rail (surveyed 2002), and Plant and Animal Species Lists (developed 2001–2005).

- Blair, Kathleen, Ph.D. Refuge Ecologist. Bill Williams River National Wildlife Refuge, Plant and Animal lists of the Bill Williams River area. August 5, 2000—telephone communication.
- Cunning, Dan. President and CEO. Lake Havasu Convention and Visitor Center. December 8, 2003—telephone conversation with Gina Trafton of BLM LHFO regarding seasonal population flux in Lake Havasu area.
- Dodson, Amanda. Geologist Havasu Field Office, Bureau of Land Management. June 6, 2004—email communication.
- Goodman, S. Nongame Specialist. Arizona Game and Fish. Desert Tortoise Field Surveys. July 21, 2005—email communication.
- Jacobson, B. Fishery Biologist. Arizona Game and Fish. Species Lists. February 2005.
- Lovato, Bernadette. Lead Concession Management Specialist. Lake Havasu Field Office, Bureau of Land Management. June 18, 2004—email communication.
- Minckly, C.O. Fishery Biologist, U.S. Fish and Wildlife Service, Parker Fishery Resources Office. Species Lists. 2005.

Index

```
Access, 1-11, 2-67, 2-77, 2-82, 2-87, 2-89,
  2-91, 2-105, 2-107, 2-149, 2-167, 2-172,
  2-184, 2-207, 2-208, 2-211, 2-212, 2-216,
  2-217, 2-218, 2-221, 2-226, 2-234, 2-235,
  3-1, 3-84, 3-86, 3-100, 3-101, 4-9, 4-16,
  4-25, 4-44, 4-52, 4-62, 4-72, 4-79, 4-91,
  4-97, 4-102, 4-105, 4-110, 4-111, 4-115,
  4-117, 4-120, 4-123, 4-126, 4-133, 4-140,
  4-143, 4-144, 4-145, 4-146, 4-147, 4-148
Acquisition, 1-10, 2-29, 2-33, 2-122, 2-158,
  2-177, 2-203, 2-218, 2-220, 2-224, 3-79,
  4-7, 4-13, 4-21, 4-34, 4-65, 4-73, 4-82,
  4-94, 4-100, 4-109, 4-112, 4-113, 4-114,
  4-140
Allotment, 2-30, 2-31, 2-147, 2-195, 3-88,
  3-90, 3-91, 3-92, 4-31, 4-46, 4-111, 4-127
American Indian Religious Freedom Act,
  2 - 17
Americans with Disabilities Act, 2-98,
  2-184
Archaeological Resources Protection Act,
  1-15, 2-21
Arizona Department of Environmental
  Quality, 2-180, 2-196, 2-197, 3-3, 3-5,
  3-8, 3-21, 4-10, 4-13, 4-58
Arizona Department of Transportation, 1-5,
  1-7, 2-150, 2-180, 2-196, 2-197, 2-205,
  3-3, 3-5, 3-8, 3-21, 4-10, 4-52, 4-58
Arizona Game and Fish Department, 1-5,
  1-7, 1-8, 2-93, 2-97, 2-102, 2-113, 2-122,
  2-144, 2-149, 2-150, 2-176, 2-188, 2-194,
  2-195, 2-198, 2-205, 3-6, 3-23, 3-26,
  3-27, 3-28, 3-32, 3-44, 3-53, 3-57, 4-55
Arizona Standards for Rangeland Health and
  Guidelines for Grazing Administration,
  1-14, 2-9, 2-99, 2-175, 2-176, 2-187,
  2-218, 4-12, 4-30, 4-127, 4-128
Arizona State Land Department, 2-31
Arizona Statewide Land Use Plan
  Amendment for Fire, Fuels and Air
  Quality Management, 2-124, 2-125,
  2-126, 2-128, 2-193
Back Country Byways, 1-12, 2-128, 2-161,
  2-163, 2-164, 3-57, 3-58, 4-54, 4-77,
  4-78, 4-80, 4-87, 4-88, 4-92, 4-93, 4-148
Bighorn sheep habitat, 2-154, 2-154
Bill Williams Management Unit, 2-4, 2-5,
```

```
Biological Assessment See Biological
  Opinion, 2-205
Biological Opinion, 2-128, 2-195, 3-44
Bureau of Land Management (BLM), 1-1,
  1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10,
  1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 2-1,
  2-2, 2-3, 2-4, 2-6, 2-9, 2-10, 2-12, 2-13,
  2-14, 2-19, 2-20, 2-22, 2-23, 2-24, 2-25,
  2-26, 2-28, 2-29, 2-30, 2-31, 2-32, 2-33,
  2-36, 2-38, 2-39, 2-38, 2-40, 2-41, 2-43,
  2-47, 2-58, 2-59, 2-61, 2-62, 2-63, 2-64,
  2-65, 2-71, 2-75, 2-77, 2-78, 2-79, 2-81,
  2-84, 2-85, 2-86, 2-87, 2-88, 2-89, 2-93,
  2-94, 2-96, 2-97, 2-99, 2-100, 2-101,
  2-103, 2-110, 2-111, 2-112, 2-113, 2-113,
  2-114, 2-115, 2-116, 2-117, 2-119, 2-120,
  2-121, 2-122, 2-123, 2-124, 2-125, 2-126,
  2-127, 2-128, 2-130, 2-131, 2-133, 2-135,
  2-139, 2-144, 2-145, 2-147, 2-149, 2-150,
  2-150, 2-154, 2-159, 2-160, 2-161, 2-165,
  2-170, 2-171, 2-172, 2-175, 2-176, 2-177,
  2-178, 2-179, 2-180, 2-181, 2-182, 2-183,
  2-184, 2-185, 2-186, 2-187, 2-188, 2-189,
  2-190, 2-191, 2-192, 2-193, 2-194, 2-195,
  2-196, 2-197, 2-198, 2-199, 2-200, 2-201,
  2-202, 2-203, 2-204, 2-205, 2-208, 2-224,
  2-225, 2-225, 2-227, 2-233, 2-236, 3-1,
  3-2, 3-3, 3-5, 3-8, 3-10, 3-14, 3-17, 3-18,
  3-19, 3-20, 3-21, 3-23, 3-29, 3-33, 3-34,
  3-40, 3-43, 3-44, 3-48, 3-50, 3-51, 3-52,
  3-55, 3-56, 3-57, 3-58, 3-60, 3-63, 3-64,
  3-66, 3-67, 3-68, 3-69, 3-74, 3-76, 3-77,
  3-78, 3-79, 3-82, 3-84, 3-85, 3-86, 3-87,
  3-90, 3-92, 3-94, 3-95, 3-96, 3-97, 3-98,
  3-99, 3-100, 3-101, 4-2, 4-3, 4-4, 4-5, 4-6,
  4-10, 4-11, 4-15, 4-16, 4-18, 4-19, 4-20,
  4-27, 4-29, 4-38, 4-41, 4-56, 4-61, 4-67,
  4-83, 4-84, 4-87, 4-88, 4-95, 4-97, 4-98,
  4-99, 4-106, 4-109, 4-110, 4-111, 4-112,
  4-113, 4-114, 4-115, 4-116, 4-117, 4-118,
  4-119, 4-121, 4-122, 4-124, 4-127, 4-131,
  4-132, 4-133, 4-137, 4-140, 4-141, 4-142,
  4-147
California Department of Fish and Game,
  1-8, 2-97, 2-102, 2-122, 2-198, 2-205,
  3-17, 3-23
California Desert Conservation Area, 2-42,
```

2-7, 4-119

2-44, 3-63, 3-97

```
California State Water Resource Control Board, 3-9
```

Camping, long term, 3-85, 3-88

Central Arizona Project, 2-42, 2-44, 2-163, 3-21, 3-59, 3-61, 3-62, 3-68, 3-97

Civilian Conservation Corps, 3-49

Colorado River Management Unit, 3-85, 4-119

Competitive use, 3-75, 4-109, 4-116

Corridor *See also* designated corridor, 1-6, 2-5, 2-44, 2-45, 2-107, 2-119, 2-133, 2-198, 2-228, 2-232, 2-234, 3-47, 3-51, 3-64, 3-66, 4-7, 4-11, 4-13, 4-21, 4-28, 4-56, 4-57, 4-84, 4-92, 4-95, 4-107, 4-113, 4-129, 4-135, 4-142

Critical habitat, designated, 3-21, 3-32, 4-41 Cross-country travel, 2-91, 4-9, 4-25, 4-44, 4-47, 4-56, 4-72

Cultural resource inventory (survey), 4-63
Cultural Resources, 1-2, 1-9, 2-12, 2-13,
2-18, 2-19, 2-21, 2-22, 2-28, 2-33, 2-55,
2-61, 2-64, 2-72, 2-81, 2-82, 2-83, 2-85,
2-109, 2-119, 2-127, 2-128, 2-143, 2-154,
2-182, 2-199, 2-202, 2-204, 2-209, 2-212,
2-214, 2-215, 2-216, 2-218, 2-220, 2-227,
2-233, 2-234, 2-235, 3-1, 45, 3-50, 3-51,
3-54, 3-55, 3-84, 3-87, 4-3, 4-12, 4-58,
4-59, 4-62, 4-63, 4-64, 4-65, 4-66, 4-67,
4-68, 4-69, 4-70, 4-71, 4-72, 4-73, 4-74,
4-75, 4-76, 4-77, 4-78, 4-81, 4-82, 4-93,
4-94, 4-99, 4-105, 4-119, 4-120, 4-125,
4-126, 4-129, 4-130, 4-131, 4-140, 4-141,
4-143, 4-145

Cumulative impacts, 2-112, 3-32, 4-1, 4-4, 4-11, 4-19, 4-20, 4-28, 4-56, 4-57, 4-62, 4-78, 4-80, 4-93, 4-98, 4-105, 4-107, 4-118, 4-126, 4-128, 4-139, 4-142, 4-148 Department of the Interior, 1-6, 2-99, 2-205,

Desert Management Unit, 2-4, 2-5, 2-6, 2-7, 3-87, 3-88

3-19, 4-14

Desert tortoise habitat, 2-29, 2-33, 2-105, 2-111, 2-112, 2-113, 2-122, 2-179, 2-191, 3-54, 3-55, 3-56, 3-65, 4-34, 4-36, 4-42, 4-43, 4-45, 4-46, 4-47, 4-48, 4-51, 4-53, 4-54, 4-73

Designated corridor *See also* Corridor, 2-41, 2-43, 2-46, 4-4

Designated roads and trails, 2-87, 2-90, 2-91, 2-92, 2-184, 3-101

Desired future conditions, 1-13, 2-1, 2-2, 2-1, 2-2, 2-4, 2-12, 2-13, 2-25, 2-59, 2-64, 2-89, 2-102, 2-124, 2-125, 2-130, 2-131, 2-136, 2-145, 2-146, 2-162, 2-166, 2-169, 2-200, 4-26, 4-111, 4-112, 4-115, 4-116, 4-117, 4-145

Desired Plant Community, 2-11, 2-27, 2-116, 2-122, 2-158, 2-175, 2-187, 3-17, 4-82

Developed recreation sites and areas, 2-78, 2-199, 3-58, 4-119

Dispersed camping, 2-67, 2-75, 2-212, 3-88, 4-41, 4-57, 4-61, 4-123, 4-128

Disposal, 1-10, 2-2, 2-30, 2-31, 2-32, 2-33, 2-36, 2-37, 2-36, 2-49, 2-50, 2-51, 2-56, 2-107, 2-111, 2-177, 2-178, 2-180, 2-181, 2-198, 2-207, 2-208, 2-209, 2-213, 2-215, 2-217, 2-224, 2-230, 2-231, 2-233, 3-79, 3-88, 3-96, 4-3, 4-4, 4-7, 4-8, 4-12, 4-13, 4-21, 4-22, 4-29, 4-34, 4-40, 4-60, 4-61, 4-64, 4-65, 4-68, 4-87, 4-94, 4-106, 4-109, 4-112, 4-113, 4-115, 4-127, 4-130, 4-132, 4-139, 4-140, 4-141, 4-142, 4-144 Easement, 4-140

Eligible river segment, 3-63

Endangered Species Act (ESA), 1-15, 2-11, 2-30, 2-31, 2-99, 2-101, 2-102, 2-112, 2-114, 2-149, 2-184, 2-189, 2-190, 2-204, 3-29, 3-32, 4-4, 4-34, 4-37, 4-42, 4-53, 4-141, 4-142

Endangered species *See also* Threatened and Endangered species, 1-9, 1-10, 2-29, 2-30, 2-101, 2-117, 2-122, 2-147, 2-153, 2-154, 2-190, 2-202, 3-57, 3-65, 4-2, 4-39, 4-41, 4-52, 4-56, 4-62, 4-73, 4-126, 4-141, 4-148

Environmental Assessment (EA) *See also* Environmental Impact Statement., 2-3, 2-112, 2-180, 2-189, 3-2, 4-4, 4-7, 1-1, 1-11, 1-15

Environmental Impact Statement (EIS) *See also* Environmental Assessment., 2-1, 2-2, 2-3, 2-37, 2-40, 2-57, 2-58, 2-145, 2-170, 2-171, 2-175, 2-187, 2-188, 2-201, 2-202, 2-203, 2-204, 3-1, 3-2, 3-6, 3-69, 3-80, 4-4, 4-5, 4-14, 4-76, 4-98

Environmental Justice (EJ), 3-1, 3-68, 3-69, 4-107

Ephemeral allotments, 2-230, 3-88, 3-90, 4-105, 4-127

```
Exchange, 1-10, 2-21, 2-30, 2-31, 2-33,
                                                        2-213, 2-235, 3-43, 3-44, 3-45, 4-105,
  2-36, 2-37, 2-177, 2-189, 2-224, 3-79,
                                                        4-106, 4-107
  3-96, 4-140, 4-142
                                                     Historical site, 2-28, 2-197, 3-47
Existing roads and trails, 2-18, 2-41, 2-87,
                                                     Intermodal Surface Transportation
  2-90, 2-91, 2-105, 2-106, 2-119, 2-184,
                                                        Efficiency Act of 1991, 3-58
  3-79, 3-84, 3-101, 4-16, 4-25
                                                     Invasive species, 2-188, 3-41, 4-35, 4-36,
Exotic species, 4-30
                                                        4-38, 4-42, 4-43, 4-45, 4-48, 4-49, 4-51,
                                                        4-53, 4-54
Federal Land Policy and Management Act
  (FLPMA), 1-1, 1-2, 1-14, 1-15, 1-16, 2-1,
                                                     Kingman Resource Area Resource
  2-2, 2-11, 2-24, 2-30, 2-38, 2-40, 2-87,
                                                        Management Plan (1995), 1-1, 2-19,
  2-135, 2-172, 2-177, 2-178, 2-181, 2-184,
                                                        2-33, 2-36, 2-38, 2-50, 2-53, 2-55, 2-56,
  2-194, 2-195, 2-201, 3-76, 4-110
                                                        2-71, 2-78, 2-90, 2-104, 2-105, 2-106,
Fire management, 1-12, 2-124, 2-125,
                                                        2-107, 2-109, 2-121, 2-147, 2-169
  2-126, 2-127, 2-128, 2-142, 2-193, 2-197,
                                                     Lake Havasu Field Office, 1-1, 1-2, 1-4, 1-5,
  2-212, 3-1, 3-42, 4-10, 4-18, 4-27, 4-50,
                                                        1-9, 1-11, 1-14, 1-17, 2-1, 2-2, 2-4, 2-5,
  4-58, 4-59, 4-61, 4-62, 4-75, 4-80, 4-94,
                                                        2-7, 2-28, 2-29, 2-30, 2-31, 2-33, 2-34,
  4-103, 4-105, 4-108, 4-124, 4-126, 4-140,
                                                        2-36, 2-38, 2-40, 2-43, 2-63, 2-71, 2-74,
  4-143
                                                        2-75, 2-79, 2-80, 2-82, 2-85, 2-89, 2-91,
Grazing permit, 2-25, 4-127
                                                        2-97, 2-99, 2-100, 2-101, 2-102, 2-106,
Groundwater, 2-27, 2-99, 2-103, 2-176,
                                                        2-108, 2-111, 2-114, 2-115, 2-124, 2-125,
  2-207, 3-4, 3-8, 3-9, 3-69, 4-5, 4-13, 4-17,
                                                        2-149, 2-161, 2-165, 2-175, 2-178, 2-181,
  4-20
                                                        2-182, 2-185, 2-186, 2-188, 2-189, 2-190,
Habitat, 1-8, 1-9, 1-12, 1-14, 2-11, 2-24,
                                                        2-197, 2-198, 2-199, 2-200, 2-203, 2-204,
  2-25, 2-29, 2-30, 2-31, 2-33, 2-41, 2-43,
                                                        2-224, 2-225, 2-226, 3-1, 3-2, 3-3, 3-4,
  2-44, 2-50, 2-52, 2-56, 2-80, 2-82, 2-91,
                                                        3-5, 3-9, 3-10, 3-11, 3-12, 3-13, 3-15,
  2-99, 2-100, 2-101, 2-102, 2-103, 2-104,
                                                        3-16, 3-18, 3-19, 3-23, 3-24, 3-26, 3-27,
  2-105, 2-107, 2-108, 2-109, 2-110, 2-111,
                                                        3-28, 3-32, 3-33, 3-41, 3-42, 3-43, 3-44,
  2-112, 2-113, 2-114, 2-115, 2-116, 2-117,
                                                        3-45, 3-47, 3-48, 3-49, 3-50, 3-52, 3-53,
                                                        3-55, 3-56, 3-57, 3-58, 3-59, 3-60, 3-63,
  2-120, 2-121, 2-122, 2-123, 2-125, 2-127,
  2-128, 2-136, 2-145, 2-147, 2-149, 2-153,
                                                        3-66, 3-67, 3-68, 3-69, 3-75, 3-76, 3-78,
                                                        3-79, 3-80, 3-81, 3-83, 3-87, 3-88, 3-91,
  2-154, 2-156, 2-164, 2-172, 2-176, 2-179,
  2-180, 2-186, 2-187, 2-188, 2-189, 2-190,
                                                        3-92, 3-93, 3-94, 3-95, 3-96, 3-97, 3-98,
  2-191, 2-192, 2-193, 2-195, 2-197, 2-200,
                                                        3-99, 3-100, 3-101, 4-5, 4-11, 4-14, 4-15,
  2-203, 2-204, 2-205, 2-206, 2-210, 2-211,
                                                        4-22, 4-23, 4-25, 4-28, 4-31, 4-36, 4-38,
  2-212, 2-213, 2-231, 2-232, 3-4, 3-5, 3-7,
                                                        4-56, 4-61, 4-68, 4-82, 4-94, 4-95, 4-96,
  3-13, 3-14, 3-17, 3-18, 3-19, 3-20, 3-21,
                                                        4-98, 4-99, 4-102, 4-105, 4-106, 4-107,
  3-22, 3-23, 3-24, 3-25, 3-27, 3-28, 3-29,
                                                        4-108, 4-109, 4-110, 4-111, 4-112, 4-113,
  3-32, 3-42, 3-44, 3-53, 3-54, 3-55, 3-56,
                                                        4-115, 4-116, 4-117, 4-118, 4-121, 4-122,
  3-57, 3-61, 3-63, 3-64, 3-65, 3-86, 3-87,
                                                        4-123, 4-127, 4-128, 4-129, 4-140, 4-141,
  4-2, 4-3, 4-14, 4-16, 4-17, 4-18, 4-20,
                                                        4-142, 4-143, 4-145, 4-146, 4-147
  4-24, 4-25, 4-28, 4-29, 4-30, 4-33, 4-34,
                                                     Land and Water Conservation Fund, 2-29,
  4-35, 4-36, 4-37, 4-38, 4-39, 4-40, 4-41,
                                                        2-177, 2-181
  4-42, 4-43, 4-44, 4-45, 4-46, 4-47, 4-48,
                                                     Land tenure, 1-10, 2-2, 2-28, 2-29, 2-35,
  4-49, 4-50, 4-51, 4-52, 4-53, 4-54, 4-55,
                                                        2-177, 2-192, 3-96, 4-12, 4-21, 4-61,
  4-56, 4-57, 4-62, 4-68, 4-69, 4-73, 4-74,
                                                        4-82, 4-95, 4-119, 4-121, 4-140
  4-82, 4-93, 4-101, 4-104, 4-105, 4-107,
                                                     Land use allocation, 1-9, 2-1, 2-2, 2-4, 2-12,
  4-118, 4-123, 4-135, 4-141, 4-142, 4-146
                                                        2-14, 2-26, 2-31, 2-33, 2-35, 2-36, 2-49,
Herd area, 2-145, 2-146, 2-149
                                                        2-52, 2-55, 2-60, 2-71, 2-91, 2-99, 2-105,
Herd Management Area (HMA), 2-145,
                                                        2-124, 2-125, 2-130, 2-132, 2-137, 2-145,
```

2-146, 2-147, 2-148, 2-149, 2-151, 2-195,

2-147, 2-153, 2-170, 2-193, 2-200, 2-225,

```
4-9, 4-16, 4-111, 4-112, 4-115, 4-116,
                                                     Mineral withdrawal See also Withdrawal,
  4-117
                                                       2-179, 2-215, 4-69, 4-70, 4-88
Land use authorization, 4-83, 4-85
                                                     Minority population, 3-68
                                                     Mojave Desert Air Quality Management
Land Use Plan, 1-1, 1-6, 1-7, 1-13, 1-14,
  1-16, 2-1, 2-2, 2-3, 2-4, 2-24, 2-25, 2-29,
                                                       District, 3-3
  2-30, 2-31, 2-46, 2-124, 2-135, 2-140,
                                                     Monitoring, 1-2, 2-1, 2-2, 2-9, 2-21, 2-22,
  2-145, 2-177, 2-181, 2-193, 2-194, 2-195,
                                                       2-27, 2-40, 2-61, 2-62, 2-91, 2-98, 2-112,
  2-204, 2-205, 3-1, 3-19, 3-29, 3-50, 3-91,
                                                       2-113, 2-114, 2-148, 2-149, 2-150, 2-175,
  3-98, 4-1, 4-6, 4-10, 4-18, 4-19, 4-106
                                                       2-185, 2-187, 2-188, 2-189, 2-195, 2-196,
Leasable minerals, 2-47, 2-52, 3-81, 1-10,
                                                       2-197, 2-201, 2-203, 2-204, 2-205, 3-9,
  2-47, 2-48, 2-179, 2-217, 2-218, 2-232,
                                                       3-17, 3-70, 3-84, 4-3, 4-6, 4-8, 4-21, 4-42,
                                                       4-46, 4-63, 4-72, 4-81
  2-233, 2-232
Locatable minerals, 3-81, 3-93, 4-37, 4-67,
                                                     Motorized trail, 2-79, 2-89, 2-159, 3-101,
  4-79, 4-87, 4-102, 4-109, 4-122, 4-130,
                                                       4-5, 4-45, 4-125
  4-131, 4-134, 4-138
                                                     Multiple use, 1-2, 1-6, 1-14, 1-16, 2-1, 2-11,
Long-term visitor area (LTVA), 2-75, 2-77,
                                                       2-24, 2-25, 2-29, 2-43, 2-63, 2-123,
  2-82, 3-88, 4-9, 4-41
                                                       2-124, 2-145, 2-162, 2-195, 2-209, 3-5,
Lower Gila North Management Framework
                                                       3-23, 3-96, 4-35, 4-92, 4-118, 4-120
  Plan (1983), 1-1, 2-13, 2-37, 2-50, 2-52,
                                                     National Ambient Air Quality Standards,
                                                       2-197, 3-2
  2-56, 2-90, 2-106, 2-145, 2-146, 2-149
Lower Gila South Resource Management
                                                     National Environmental Policy Act (NEPA),
  Plan (1988), 1-1, 2-37, 2-39, 2-52, 2-56,
                                                       1-2, 1-5, 1-7, 2-2, 2-76, 2-77, 2-94, 2-95,
  2-57, 2-90
                                                       2-105, 2-179, 2-185, 2-196, 2-199, 2-201,
low-income population, 3-68
                                                       2-202, 2-203, 2-219, 3-1, 3-75, 3-84, 4-1,
Maintenance, 2-122, 2-139, 3-3, 4-8, 4-83
                                                       4-4, 4-10, 4-13, 4-19, 4-21, 4-27, 4-41,
Management actions, 1-2, 1-13, 2-1, 2-2,
                                                       4-87, 4-94, 4-110, 4-116, 4-117, 4-121
  2-4, 2-9, 2-12, 2-18, 2-21, 2-26, 2-63,
                                                     National Historic Preservation Act of 1966,
  2-74, 2-86, 2-99, 2-111, 2-112, 2-113,
                                                       as amended (NHPA), 2-17, 2-21, 2-205
  2-126, 2-133, 2-135, 2-138, 2-144, 2-145,
                                                     National Pollutant Discharge Elimination
  2-149, 2-157, 2-158, 2-164, 2-168, 2-171,
                                                       Act, 2-180
  2-172, 2-175, 2-176, 2-188, 2-189, 2-195,
                                                     National Register of Historic Places
  2-199, 2-201, 2-202, 2-218, 2-219, 2-221,
                                                       (NRHP), 1-10, 2-14, 2-19, 2-22, 2-33,
  2-224, 2-235, 3-9, 3-23, 3-61, 4-1, 4-3,
                                                       2-153, 2-155, 2-156, 3-49, 3-54, 3-56,
  4-16, 4-55, 4-70, 4-80, 4-81, 4-88, 4-89,
                                                       4-62, 4-64, 4-65, 4-66, 4-67, 4-69, 4-70,
  4-94, 4-102, 4-103, 4-111, 4-112, 4-115,
                                                       4-71, 4-72, 4-74, 4-88, 4-131, 4-140
  4-116, 4-117, 4-143, 4-147
                                                     National Wild and Scenic Rivers System,
Memorandum of Understanding, 1-7, 1-15,
                                                       1-11, 2-7, 2-170, 3-63
  2-180, 2-189, 2-205, 3-57
                                                     Native American Graves Protection and
Metropolitan Water District of Southern
                                                       Repatriation Act, 1-15 2-21
                                                     Northern and Eastern Colorado Desert
  California, 1-5, 1-8, 3-5
Mineral entry, 2-18, 2-19, 2-33, 2-38, 2-55,
                                                       Coordinated Management Plan, 2-147,
  2-56, 2-179, 2-212, 3-93, 4-37, 4-61,
                                                       3-45
  4-67, 4-68, 4-69, 4-70, 4-87, 4-88, 4-102,
                                                     Notice of Intent, 1-4
                                                     Off-Highway Vehicle (OHV), 2-51, 2-63,
  4-114
Mineral material disposal, 2-18, 2-49, 2-50,
                                                       2-66, 2-67, 2-68, 2-76, 2-77, 2-82, 2-83,
  2-51, 2-56, 2-167, 2-180, 2-215, 2-231,
                                                       2-84, 2-87, 2-90, 2-91, 2-92, 2-106,
  4-8, 4-13, 4-22, 4-36, 4-68, 4-87, 4-130,
                                                       2-163, 2-180, 2-184, 2-186, 2-197, 2-200,
  4-132, 4-133, 4-138, 4-139
                                                       2-208, 2-226, 2-231, 2-236, 3-50, 3-55,
Mineral rights, 2-212, 2-224, 4-4, 4-7, 4-21,
                                                       3-58, 3-59, 3-65, 3-68, 3-75, 3-78, 3-83,
```

4-61, 4-113, 4-114

3-84, 3-85, 3-87, 3-88, 3-100, 3-101, 4-5,

4-8, 4-9, 4-10, 4-11, 4-15, 4-16, 4-17,

```
4-20, 4-24, 4-25, 4-38, 4-42, 4-44, 4-45,
                                                        2-51, 2-63, 2-71, 2-72, 2-73, 2-78, 2-79,
  4-46, 4-47, 4-50, 4-52, 4-53, 4-54, 4-55,
                                                        2-92, 4-9, 4-16, 4-44, 4-70, 4-141, 4-145
  4-57, 4-68, 4-71, 4-72, 4-73, 4-109,
                                                     Recreation Opportunity Spectrum (ROS),
  4-110, 4-116, 4-117, 4-118, 4-119, 4-121,
                                                        2-41, 2-69, 2-74, 2-86, 2-158, 2-167, 4-8,
  4-122, 4-123, 4-125, 4-128, 4-133, 4-143,
                                                        4-15, 4-22, 4-24, 4-43, 4-88, 4-89, 4-102,
  4-145
                                                        4-141, 4-145
OHV designation, 2-77
                                                     Recreation settings, 2-140, 2-143, 2-228,
Open area, 2-77, 2-87, 2-91, 2-98, 2-184,
                                                        2-229, 2-230, 4-124
  2-185, 2-197, 2-226, 3-62, 3-79, 3-84,
                                                     Resource Advisory Council, 2-9
  4-72, 4-110, 4-117
                                                     Resource Management Plan, 1-1, 1-2, 1-7,
                                                        1-9, 1-14, 1-17, 2-1, 2-2, 2-3, 2-9, 2-14,
Paleontology, 3-51
Perennial stream, 3-48
                                                        2-19, 2-20, 2-21, 2-26, 2-29, 2-33, 2-34,
Perennial/ephemeral allotments, 2-231
                                                        2-37, 2-36, 2-38, 2-41, 2-46, 2-53, 2-57,
Personal income, 3-71
                                                        2-58, 2-85, 2-87, 2-88, 2-93, 2-96, 2-97,
Planning criteria, 1-15, 1-16
                                                        2-101, 2-111, 2-123, 2-127, 2-128, 2-130,
Plant community, 2-11, 2-27, 2-116, 2-122,
                                                        2-135, 2-145, 2-152, 2-167, 2-170, 2-175,
  2-158, 2-175, 2-187, 3-17, 4-19, 4-60,
                                                        2-177, 2-181, 2-184, 2-189, 2-194, 2-200,
  4-81, 4-82
                                                        2-201, 2-202, 2-203, 2-205, 2-219, 3-1,
Prescribed fire (burning), 2-126, 4-10, 4-18,
                                                        3-2, 3-14, 3-19, 3-20, 3-21, 3-32, 3-33,
  4-48, 4-50, 4-58, 4-59, 4-60, 4-62, 4-74,
                                                        3-43, 3-45, 3-55, 3-56, 3-58, 3-61, 3-62,
  4-75
                                                        3-79, 3-92, 3-101, 4-2, 4-4, 4-11, 4-15,
Primitive recreation, 2-3, 2-4, 2-143, 2-229,
                                                        4-18, 4-20, 4-27, 4-28, 4-56, 4-67, 4-68,
  4-104, 4-125
                                                        4-69, 4-73, 4-77, 4-82, 4-83, 4-94, 4-98,
Proper functioning condition (riparian
                                                        4-127, 4-132, 4-146
  wetland areas), 2-9, 2-10, 2-116, 2-120,
                                                     Right-of-way (ROW), 2-18, 2-40, 2-41,
  2-122, 2-187, 4-73, 4-74
                                                        2-42, 2-43, 2-44, 2-92, 2-94, 2-106,
Range improvement, 2-28, 2-105, 2-112,
                                                        2-107, 2-110, 2-133, 2-144, 2-171, 2-178,
  2-117, 2-139, 2-175, 2-192, 3-91, 4-64
                                                        2-179, 2-208, 2-207, 2-218, 3-3, 3-60,
Rangeland, 1-2, 1-14, 2-9, 2-11, 2-24, 2-25,
                                                        3-61, 3-65, 3-78, 3-97, 3-100, 4-35, 4-45,
  2-27, 2-28, 2-36, 2-99, 2-106, 2-167,
                                                        4-60, 4-75, 4-79, 4-83, 4-84, 4-85, 4-95,
  2-175, 2-176, 2-186, 2-187, 2-188, 2-212,
                                                        4-110, 4-113, 4-114, 4-121, 4-125, 4-140,
  2-213, 2-224, 2-230, 2-233, 2-235, 3-1,
                                                        4-141, 4-144
  3-2, 3-80, 3-88, 4-3, 4-7, 4-12, 4-20, 4-30,
                                                     Riparian, 1-13, 2-4, 2-5, 2-6, 2-7, 2-10,
  4-59, 4-63, 4-78, 4-81, 4-94, 4-99, 4-100,
                                                        2-11, 2-27, 2-29, 2-33, 2-41, 2-49, 2-50,
  4-105, 4-108, 4-111, 4-120, 4-126, 4-127,
                                                        2-53, 2-54, 2-55, 2-99, 2-103, 2-104,
  4-128, 4-129, 4-141, 4-143
                                                        2-105, 2-106, 2-108, 2-111, 2-114, 2-115,
Raptor, 3-28, 3-57
                                                        2-116, 2-120, 2-122, 2-123, 2-125, 2-146,
Record of Decision, 2-40, 2-130, 2-170,
                                                        2-147, 2-149, 2-153, 2-154, 2-158, 2-167,
  2 - 171
                                                        2-171, 2-179, 2-186, 2-187, 2-190, 2-204,
Recovery, 2-12, 2-30, 2-100, 2-101, 2-102,
                                                        2-205, 2-217, 2-218, 2-227, 2-231, 2-232,
  2-111, 2-112, 2-113, 2-114, 2-115, 2-120,
                                                        3-4, 3-13, 3-14, 3-16, 3-17, 3-18, 3-19,
  2-188, 2-190, 2-194, 2-218, 3-32, 3-75,
                                                        3-21, 3-23, 3-26, 3-27, 3-28, 3-32, 3-41,
  4-24, 4-30, 4-31, 4-60, 4-67
                                                        3-42, 3-54, 3-56, 3-57, 3-61, 3-64, 3-65,
Recreation and Public Purpose (R&PP),
                                                        3-87, 4-17, 4-18, 4-26, 4-27, 4-30, 4-33,
  2-22, 2-29, 2-30, 2-32, 2-35, 2-36, 2-76,
                                                        4-34, 4-36, 4-37, 4-39, 4-40, 4-43, 4-46,
  2-110, 2-177, 2-181, 2-211, 2-224, 3-78,
                                                        4-47, 4-48, 4-51, 4-52, 4-53, 4-54, 4-55,
  4-7, 4-21, 4-34, 4-64, 4-65, 4-109, 4-112,
                                                        4-57, 4-64, 4-68, 4-69, 4-73, 4-74, 4-80,
  4-131, 4-140
                                                        4-84, 4-85, 4-86, 4-87, 4-88, 4-91, 4-92,
Recreation Management Zones (RMZs) See
                                                        4-114, 4-115, 4-123, 4-133, 4-134, 4-135,
                                                        4-138, 4-142
  Special Recreation Management Areas.,
```

```
Rockhounding, 2-86, 2-163, 4-45, 4-54, 4-67
```

- Saleable minerals, 1-10, 2-47, 2-50, 2-56, 2-180, 3-80, 4-36, 4-101, 4-109, 4-114, 4-115, 4-130, 4-133, 4-135, 4-137, 4-138, 4-139
- Scoping, 1-1, 1-4, 1-8, 1-9, 1-12, 2-1, 2-3, 2-97, 3-67, 3-69
- Section 7 Consultation, 2-127, 2-202, 2-204 Sensitive species, 2-11, 2-101, 2-122, 2-181, 3-29, 4-29, 4-46, 4-53
- Special Area Designation (SAD), 1-13, 2-2, 2-16, 2-41, 2-43, 2-72, 2-76, 2-81, 2-91, 2-92, 2-99, 2-130, 2-152, 2-172, 2-177, 2-212, 2-217, 2-218, 2-219, 2-223, 2-229, 2-233, 2-235, 3-1, 3-53, 3-65, 4-27, 4-52, 4-58, 4-72, 4-76, 4-80, 4-82, 4-83, 4-85, 4-88, 4-92, 4-105, 4-108, 4-125, 4-126, 4-133, 4-137, 4-138, 4-140, 4-147
- Special Cultural Resource Management Area, 2-17, 2-19, 2-49, 4-68
- Special Recreation Management Area (SRMA), 2-33, 2-63, 2-64, 2-65, 2-66, 2-67, 2-69, 2-70, 2-71, 2-72, 2-73, 2-78, 2-79, 2-80, 2-81, 2-82, 2-83, 2-84, 2-85, 2-86, 2-92, 2-154, 2-156, 2-182, 2-203, 2-225, 3-84, 4-15, 4-22, 4-38, 4-70, 4-89
- Special Recreation Permit (SRP), 2-77, 2-78, 2-85, 2-182, 3-75, 3-84, 3-85
- Special Recreation Zone (SRZ), 2-73
- Special status species, 1-10, 1-11, 2-19, 2-27, 2-94, 2-99, 2-101, 2-105, 2-110, 2-116, 2-117, 2-119, 2-122, 2-179, 2-186, 2-189, 2-190, 2-191, 2-210, 2-234, 3-12, 3-23, 3-29, 3-32, 3-33, 4-29, 4-34, 4-35, 4-37, 4-39, 4-46, 4-47, 4-50, 4-51, 4-53, 4-54, 4-57, 4-74, 4-107
- Split-estate, 2-29, 2-38, 2-178, 2-220, 4-34, 4-94, 4-131
- State Implementation Plan, 2-197 Surface occupancy, 2-18, 2-52, 2-53, 2-54, 2-141, 2-167, 2-192, 2-215, 2-226, 2-232, 4-22, 4-37, 4-69, 4-87, 4-101, 4-115, 4-130, 4-135, 4-136, 4-139
- Threatened and Endangered species *See also* Endangered species, 2-20, 2-155, 2-210 Trail, 3-46, 3-49, 3-54, 4-46
- Travel Management Network (TMN), 2-87, 2-97, 4-5

- U.S. Army Corps of Engineers, 1-3, 2-180, 3-4, 3-18, 3-21, 3-49, 3-53, 3-57, 3-64, 3-100, 4-24, 4-27
- U.S. Bureau of Reclamation, 1-3, 1-5, 1-6, 1-7, 1-8, 1-15, 2-18, 2-29, 2-32, 2-36, 2-55, 2-85, 2-154, 2-161, 2-179, 2-180, 2-181, 2-190, 2-196, 2-198, 3-4, 3-5, 3-10, 3-17, 3-21, 3-76, 3-78, 3-96, 3-99, 4-6, 4-12, 4-13, 4-68, 4-112, 4-122
- U.S. Council on Environmental Quality, 1-2, 1-7
- U.S. Environmental Protection Agency, 1-2, 2-2, 3-1, 3-3, 3-68, 4-1, 4-8, 4-11, 4-38
- U.S. Fish and Wildlife Service, 1-5, 1-8, 2-102, 2-111, 2-114, 2-115, 2-117, 2-122, 2-127, 2-128, 2-149, 2-176, 2-188, 2-189, 2-191, 2-198, 2-202, 2-204, 3-5, 3-6, 3-17, 3-22, 3-23, 3-32, 3-33, 3-44, 3-79, 4-141
- U.S. Forest Service, 3-79
- Vegetation treatments, 2-187, 2-188, 2-205, 4-49, 4-51
- vehicle route, 2-95, 2-139, 2-188, 2-208, 4-18, 4-53, 4-97, 4-102
- Vending, 2-78, 2-140, 2-183, 2-184, 2-225, 3-85, 4-15, 4-43
- Visual Resource Management (VRM), 2-20, 2-130, 2-131, 2-133, 2-140, 2-193, 2-211, 2-219, 2-230, 2-229, 2-236, 3-66, 4-51, 4-52, 4-94, 4-95, 4-96, 4-97, 4-98, 4-103, 4-124, 4-136, 4-137, 4-142, 4-147
- Wash, 2-3, 2-67, 2-69, 2-70, 2-73, 2-82, 2-92, 2-107, 2-117, 2-120, 2-154, 2-158, 3-9, 3-12, 3-24, 3-47, 3-51, 3-57, 3-65, 3-68, 3-84, 3-101, 4-9, 4-16, 4-17, 4-23, 4-24, 4-25, 4-40, 4-41, 4-44, 4-45, 4-48, 4-50, 4-54, 4-57, 4-58, 4-85, 4-91, 4-97, 4-102, 4-104, 4-145
- Western Utility Group, 2-42, 2-44, 2-45, 3-97
- Wild horse and burros, 2-211, 2-217, 2-219, 2-223, 4-80, 4-129
- Wilderness characteristics, 1-13, 2-34, 2-51, 2-54, 2-93, 2-95, 2-115, 2-128, 2-135, 2-136, 2-139, 2-140, 2-141, 2-142, 2-143, 2-144, 2-194, 2-211, 2-216, 2-220, 2-221, 2-222, 2-223, 2-229, 2-231, 2-232, 2-236, 3-67, 3-68, 4-7, 4-12, 4-20, 4-37, 4-56, 4-68, 4-69, 4-75, 4-78, 4-80, 4-92, 4-94, 4-99, 4-100, 4-101, 4-102, 4-4-103, 4-104, 4-105, 4-125, 4-137

- Wilderness Study Area (WSA), 1-11, 2-33, 2-41, 2-45, 2-49, 2-53, 2-96, 2-152, 2-165, 2-167, 2-177, 2-218, 2-231, 2-232, 3-60, 3-62, 4-4, 4-55, 4-68, 4-76, 4-78, 4-80, 4-81, 4-83, 4-87, 4-122, 4-138, 4-139
- Wilderness, 1-11, 1-13, 1-15, 2-5, 2-7, 2-33, 2-44, 2-45, 2-64, 2-66, 2-69, 2-73, 2-95, 2-122, 2-135, 2-136, 2-137, 2-138, 2-152, 2-163, 2-165, 2-166, 2-167, 2-168, 2-177, 2-181, 2-194, 2-204, 2-211, 2-216, 2-217, 2-218, 2-219, 2-220, 2-223, 2-229, 2-236, 3-1, 3-21, 3-57, 3-58, 3-59, 3-60, 3-61, 3-62, 3-63, 3-65, 3-66, 3-67, 3-68, 3-87, 3-100, 4-4, 4-55, 4-56, 4-58, 4-68, 4-69, 4-73, 4-75, 4-76, 4-78, 4-81, 4-83, 4-87, 4-88, 4-92, 4-99, 4-103, 4-104, 4-105, 4-108, 4-125, 4-126, 4-136, 4-137, 4-138, 4-140, 4-143
- Wildlife Habitat Areas (WHAs), 2-34, 2-41, 2-46, 2-94, 2-101, 2-105, 2-108, 2-109, 2-115, 2-122, 2-211, 2-222, 4-46, 4-47, 4-52, 4-74, 4-92, 4-103, 4-146
- Withdrawal *See also* Mineral Withdrawal, 2-18, 2-29, 2-52, 2-55, 2-56, 2-178, 2-179, 2-215, 2-232, 4-37, 4-69, 4-70, 4-88, 4-115, 4-130, 4-131, 4-138, 4-139 Yuma District Resource Management Plan (1987), 1-1, 2-14, 2-18, 2-33, 2-36, 2-38, 2-41, 2-49, 2-50, 2-51, 2-52, 2-53, 2-55, 2-73, 2-74, 2-75, 2-76, 2-77, 2-82, 2-83, 2-90, 2-91, 2-92, 2-101, 2-102, 2-103, 2-105, 2-106, 2-107, 2-108, 2-109, 2-119,

2-126, 2-147, 2-149, 2-167, 2-170, 2-232,

4-2, 4-14, 4-134